

The District Health System Experiences and Prospects for Africa



GTZ * Health, Population, Nutrition Division



WHO Collaborating Centre for Health Systems Development
Centre Collaborateur OMS pour le Développement des Systèmes de Santé
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The District Health System
Experiences and prospects for Africa

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Preface

The Health, Population and Nutrition Division of GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit), pursues the implementation of the primary health care strategy (PHC). To this end, the Division, commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ), has supported and will continue to support numerous projects to develop district health care systems in Asia, Latin America and, above all, in Africa.

This book summarizes the experiences made in sub-Saharan Africa, particularly in projects in Benin, Burkina Faso, Congo, Guinea, Madagascar, Mali, Togo, and Zaire. GTZ operations in sub-Saharan Africa cover 24 district health projects in 14 countries.

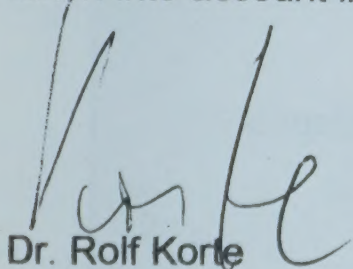
The concept described here has been presented in a very simplified manner and may set goals which are very difficult to achieve. The varying conditions and circumstances in the different health districts have only been accounted for in pinpointed areas, to underline specific approaches and strategies.

The book does not, therefore, contain recipes for everyday practice, but is rather an orientation guideline for planning and management, both at health district and national levels.

It must be emphasized that a district health strategy can never be considered complete. It has to be continuously developed, adjusted, corrected and improved to match the situation and the available resources. We stress the conceptual and development aspects rather than static concepts.

A further point to be remembered is that the health district is only in part an autonomous sub-unit of the national health system. It is equally important to further develop the overall system, setting the master framework. Both strategic approaches complement each other.

Critical comments and suggestions to this end are very welcome. They will be taken into account in a forthcoming revised edition.



Dr. Rolf Korte

Head of the Health, Population, Nutrition Division, GTZ
Eschborn, September 1994

1. INTRODUCTION

Twelve years after the Alma-Ata Conference, the primary health care (PHC) strategy is still considered to be the most suitable way to achieve the global goal of "Health for All". Although almost every country of the Earth has adopted the resolutions of the 1978 Alma-Ata Conference, the implementation of these strategies, so convincing in theory, has proven to be far more difficult than assumed.

Difficulties began at the stage of interpreting the principles and the eight elements of the PHC strategy. Because of the disillusion regarding the limited capacities of modern, hospital-based medical care and the initial enthusiasm for the idea of self-help initiatives by the community, activities at village level were often over-emphasized in the years immediately following Alma-Ata, and the professional health services were often neglected, even deliberately. Only after numerous village programmes operated by community health workers had failed was it recognized that well-functioning health centres and hospitals are necessary pre-conditions for the survival of these village health units.

Primary health care is only possible through an integrated mix of curative, preventive and health promotion activities. Today, our understanding of Primary Health Care has improved considerably due to experiences made in the field and numerous studies and conferences.

Primary Health Care means:

Curative and preventive services combined with health promotion activities organized in active collaboration with the community, tapping local human and material resources, which are accessible to and affordable by the population.

Primary Health Care is not restricted to:

- simple interventions (e.g. rehydration and preventive care);
- promotion of village health workers and community development;
- activities at the first level of care (dispensaries etc.).

Primary Health Care also incorporates the competent referral hospital.

Primary Health Care is based on the following principles:

- maximum accessibility;
- use of local resources;
- integration of the target population in planning/implementation;
- integration of preventive and curative services;
- rationalization of the health service (appropriate technology, financing and management);
- intersectoral cooperation.

Table 1: Definition of Primary Health Care

It soon became evident that attempts at national level to implement the PHC concept country-wide mostly failed because the countries were too large and the tasks too complex to be managed centrally. The principles of the PHC strategy could only be implemented by greater decentralization of the health sector, breaking it down, for example, into so-called districts.

As from 1985, several international workshops were held to discuss this approach, which finally, in August 1987, led to the Declaration of Harare signed by representatives from 22 countries, demanding intensified primary health care in a well-organized district health system, and establishing the health district as the optimal operational unit for the identification of those who are not receiving full health care, and implementation of strategies to improve the health situation of the entire population.

The health district is the most suitable operational unit to implement the primary health care strategy in line with the Alma-Ata resolutions.

There is no consensus yet down to which level decentralization should be implemented. Most countries consider the district to be the responsible operational unit, although practical experience has not yet clearly indicated whether this unit is still too large and perhaps a large part of the responsibility should be delegated to the sub-district level.

Faced with the present economic crisis, local partner organizations hope that decentralization will allow health care costs to be more intensively borne by the newly-created health districts and their users, thus relieving their budgets. But it is becoming clear that government contributions to health care services in the periphery are absolutely essential; on the contrary, health budgets should be increased if sustainable health care is to be assured.

1.2 The district

The district, as an operational unit, corresponds to a defined administrative area with a population of approximately 50.000 to 300.000 (or more). These administrative areas have varying names, depending on the colonial background: region, province, department, préfecture, zone, district etc. The local government is headed correspondingly by a governor, head of department, etc.

The District Health System (DHS) is a segment of the National Health System (NHS). It is also called the regional or intermediary level of the NHS. Usually, the DHS catchment areas correspond to the administrative boundaries of the district, although they may also differ.

The DHS (see Figure 2) comprises all facilities and individuals in the district who are involved in health care at the various intervention levels, and includes not only governmental but also church, charity and private health care providers. In principle, traditional healers are also included, although they seldom cooperate with the DHS.

The district is managed by a team bearing responsibility for all DHS activities and their co-ordination, thus ensuring its functioning as an integral system.

The health district usually has two operational levels, with 10-20 health centres/dispensaries at the primary level and one or more hospitals (with 100 to 200 beds each) at the secondary or reference level.

Traditional birth attendants, village health workers (where they still exist) and other village level activities relevant to the health sector are supported by the health centres as quasi-annex activities. Despite the negative experiences made with village health units and village health workers (VHW) in many countries, their support is expedient wherever access to health services is difficult and the local community is committed to maintaining such stations.

The vertical programmes (e.g. the expanded programme on immunization, family planning or AIDS control) should be co-ordinated with the horizontal health services and integrated as far as possible, at least at the primary level. Private facilities (clinics, dispensaries, private practices, hospitals, pharmacies, etc.) should be incorporated into the overall planning and conceptual design.

The decisive factors in planning are the size of the target groups and the anticipated work load at the given facility.

**Planning model for the health district:
(hypothetical figures)**

1 health centre for 6,000 inhabitants (rural)
10,000 inhabitants (urban)

Personnel: 1 nurse (4-year training)
2 nurses or social assistants, midwives (3-year training)
1-2 support personnel.

Maximal work load per year (rural region):

6,000 new patients (assumption: 1 disease-episode per capita per year)

300 pregnancies (assumption: birth rate 50/1000)

900 ante-natal consultations (assumption: 3 per pregnancy)

1,350 infant consultations/immunizations in the first year of life
(assumption: mortality 10 %; 5 consultations/immunizations)

504 family planning consultations (assumption: 40 % of all women aged 15-49, i.e. = $6000 \times 0.21 \times 0.4$).

At an average utilization rate of 50 % (curative), 80 % (ante-natal care), 20 % (family planning), a rural health centre (50 births/1000 inhabitants, infant mortality rate 10%) can therefore anticipate the following weekly work load:

58 new cases ($6,000 \times 0.5 : 52$)

5 ante-natal consultations ($900 \times 0.8 : 52$)

26 child care consultations ($300 - 10\% = 270 \times 5 : 52$)

5 FP consultations ($6000 \times 0.21 \times 0.2 : 52$)

Table 2: Hypothetical example to establish the planning data, based on average figures. These are taken from various projects although they may fluctuate depending on local conditions. The example gives only an indication for an actual planning model.

Compared to a centralized health care system, the health district offers considerable advantages:

- it is **large enough** to establish a health system and to justify the costs involved for investment in and management of health services, particularly where hospitals are concerned (favourable cost-benefit ratio);
- it is **small enough** to know and take account of the demographic and socio-economic situation;
- both **planning approaches** - top-down and bottom-up - can easily be co-ordinated thanks to the direct contact at all levels;

- **communication** with the target population and its participation in planning and organization are easier to handle;
- **management** (e.g. supervision) is more transparent and thus more reliable;
- **co-ordination** is easy to achieve between the various programmes and services at different levels;
- **intersectoral co-operation** (particularly with the agriculture, education, water and sanitation sector) is improving.

Preconditions for a well functioning DHS:

- A DHS can only function on a target-oriented basis when political decisions do not remain declarations of intent, but actually create the required framework conditions:
- The decentralization of the health system must be legalized and implemented by means of regulations and legislation.
- The necessary financial and human resources must be made available by the State (and other executing organizations).
- The DHS must have wide-scale autonomy in the use of its physical and human resources. Income generated by the health services must remain at the disposal of these services.
- Sufficient management personnel, qualified in planning and management activities, must be available. One chief district physician is not enough; he/she must be assisted by a management team whose management function is recognized and accepted by all staff members in the district, particularly the hospital physicians.

1.3 The concept of the district health system

The **objective** of a DHS is to provide health care of acceptable quality which is based on the needs of the local population, and is accessible to a maximum number of people.

To achieve this, planning and implementation has to take account of several sub-areas (see table). They are closely linked, but for operational purposes they can be sub-divided into different activity areas.

Planning is based on a systematically interlinked concept as summarized in the planning and evaluation matrix given below (various methods can be used, all based on similar principles - reference is particularly made to Annex 1: A. Kielmann: Health System Analysis).

Planning and evaluation matrix for the district health system*	
Concept	Determinants
1. Relevance	<ul style="list-style-type: none"> epidemiological situation (of the planned DHS) health problems in the district solvability of the problems
2. Availability (of health care services in the DHS)	<ul style="list-style-type: none"> infrastructure resources <ul style="list-style-type: none"> → human → physical → financial
3. Accessibility (of the services)	<ul style="list-style-type: none"> geographical accessibility financial reasonableness
4. Acceptance (by the users of the services offered)	<ul style="list-style-type: none"> socio-cultural barriers co-determination potential of the target population communication between personnel and the clients (reception) availability of drugs effectiveness of treatment
5. Quality of care (from the viewpoint of the Public Health Authority)	<ul style="list-style-type: none"> diagnosis and therapy: capacity and efficiency qualifications organization and administration (continuity/integration) rational use of resources financing system supervision

Table 3: Planning and evaluation matrix* modified by H.Görgen based on a proposal by T. Tanahashi, WHO, Division of Strengthening of Health Services, 1978. This matrix (and others- e.g. Annex 1, A. Kielmann) allow a systematic and logical assessment of the given situation and facilitates practical work considerably.

Numerous different, but inseparably linked activity areas are involved in the development of a district health system. These can only be separated for operational reasons, i.e. to facilitate the actual planning process: the list below largely reflects the results from many planning workshops held in projects in Africa over the last ten years.

Activity areas within the district health system

PLANNING AND MANAGEMENT

1. Identification of health problems
2. Development of an information system
3. Concept of an integrated DHS
4. Establishment of a development plan
5. Organization of administration
6. Supervision
7. Studies and operational research
8. Intersectoral cooperation
9. Integration of the private sector

RATIONALIZATION OF HEALTH SERVICES (PRIMARY LEVEL)

1. Communication with the target population
2. Operational planning
3. Infrastructure and equipment
4. Staffing
5. Referral system

THE DISTRICT HOSPITAL

1. Concept and definition of tasks
2. Infrastructure and equipment
3. Staffing and personnel qualifications
4. Organization and administration
5. Financing
6. Information and feedback

HUMAN RESOURCES DEVELOPMENT

1. Staff scheduling
2. Basic training and upgrading
3. Motivation

FINANCING SYSTEM

1. The concept
2. Socio-economic conditions
3. The health service and the community
4. Drug supply
5. District management tasks

DRUG SUPPLY

1. Essential drugs policy
2. Rational drug prescription
3. Organization and administration
4. Price fixing
5. Incorporation of the private sector

COMMUNITY PARTICIPATION IN HEALTH CARE

1. Regulating co-determination
2. Community activities
3. Self-help groups

TECHNICAL OPERATIONS AND MAINTENANCE

1. The concept
2. Maintenance system
3. Personnel training
4. Supervision
5. Costs and financing

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2. PLANNING AND MANAGEMENT

- 2.1 Identification of health problems
- 2.2 Development of an information system
- 2.3 Concept of an integrated DHS
- 2.4 Establishment of a development plan for the DHS
- 2.5 Organization of administration
- 2.6 Supervision
- 2.7 Studies and operational research
- 2.8 Intersectoral cooperation
- 2.9 Integration of the private sector

2.1 Identification of health problems

Prior to planning, the major health problems of the target population and the main problems of the pertinent health care service should be analysed, existing information should be verified.

The major health problems should already be recorded in the morbidity and mortality statistics of the health service and its registers; however, these data are usually unreliable because often enough the majority of the population is not registered and the surveyed data are inexact and incomplete. Therefore, it is usually necessary to carry out studies or household surveys (e.g. on the occasion of the local census in the district) in order to become acquainted with the target population and particularly such sub-target groups as mothers, infants, elderly people, the poor, the chronically ill, social or ethnic minority groups, etc.

In order to obtain more precise data on the epidemiology of the main diseases and their causes, it should be noted that, due to the different level of knowledge and perception of health problems, the population often has different priorities as those identified by scientific surveys.

When assessing health problems, attention should be paid to whether these problems can be solved, and what are the expenses (e.g. for drugs, mosquito nets, insecticides), and inputs (e.g. for mass campaigns) necessary for the implementation of the planned strategies. The acceptance of these strategies and methods by the population is a core aspect to be assessed, from financial, cultural and other points of view.

The criteria for the evaluation of health problems can be summarised as follows:

Perception level	Importance	Means of influence
Health personnel	Severity Frequency	Technical (methods) Operational (inputs) Costs
Population	Perception Assessment	Acceptance of methods

Table 4: Criteria for the evaluation of health problems

The dynamic relationship between the (largely objective) identification of needs and (largely subjective) articulation of needs is illustrated in the following graph:

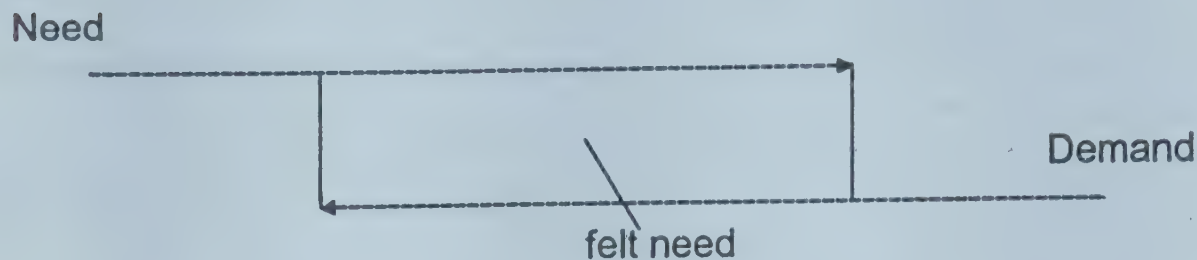


Figure 1: The dynamic relationship between need and demand (according to P. Mercenier, Antwerp). The arrows indicate how the parameters can be modified (e.g. through acquired knowledge or improved information of the clients).

We speak of felt needs when need and demand correspond. The dynamics of this relationship lie in the fact that felt needs can change quite considerably: health education can both raise the needs (e.g. demand for family planning) or limit them (e.g. unjustified demand for vitamin prescriptions).

In most developing countries (the present publication is based on experiences from countries in sub-Saharan Africa) the main causes for inadequate health care are known and widely identical. In addition to scarce resources, main problems are the lack of concepts and planning, problems related to the financing system, drug supply, supervision and human resources development and deficient infrastructure (see the following sections for more details).

2.2 Development of an information system

The aim of the reporting system is to provide up-to-date information on the epidemiological situation in the covered area and to provide operational data on the different services and programmes, and thus of their functionality (e.g. utilization rate).

Such information is essential for real-time, efficient planning. Part of the data can be easily obtained and regularly incorporated into the monitoring system, while other data require special surveys at greater intervals (e.g. every two to three years).

The figures obtained (or estimated, if necessary) on the target groups are the essential basis for calculation (e.g. denominators) because the ratios and rates indicate the extent to which objectives have been achieved. Absolute figures (e.g. the number of consultations) only describe the workload.

By comparing the data in the individual services with the district average, it is easier to identify deficits or gaps in health care supply and to analyse organizational problems.

Feedback on these findings to the health service and comparison with the other services in the district are both useful and motivating.

Rationalization of the reporting system, both at regional and national level, leads to greater efficiency. Experience has shown that it requires:

- the use of simple easily understandable forms;
- restriction to the major morbidity and mortality data (standardized, for example, according to the WHO classification);
- regular feedback of information both from the National Directorate of Statistics and Epidemiology to the districts and also from the district management to the individual health services;
- integration of operational and management data.

The following example of a **simple (public health) monitoring** system is limited to easily surveyable data to be collected regularly, providing the district management with information on:

- the epidemiology of the major health problems;
- the availability and accessibility of the services;
- the relevance of the activities (problem-orientation);
- the quality of health care;
- the acceptance by the population.

This data set can be considered the minimum monitoring system of a district health care service. It can be extended in line with the size of the DHS, the scope of services offered and the given technical level. It complements the registration procedure for morbidity and mortality statistics which is obligatory in all countries (no matter what quality level). It should be compiled every three or six months.

The advantage of this minimum monitoring system is that it can be kept by the staff of any health centre and does not require specialized skills (e.g. computer training). It allows the registration of up-to-date data, it is technically simple and easy to understand. Graphs illustrating the epidemiological evolution over time give valuable additional information.

More in-depth data surveys with detailed questionnaires should be carried out at greater intervals (e.g. several years) by outside specialists. Thus, the validity of the data obtained from routine surveys can be verified.

Appropriate reporting systems already exist in the following GTZ assisted projects:

Loubomo/Congo: Health centre reporting forms, see Annex 2, and one (of several) forms to monitor the functionality of the health centres in the district, see Annex 3.

North West Province/Cameroon: A provincial reporting system (HMIS) is being developed consisting of a complete set of forms for all levels of the provincial health care system and the province directorate.

DRAFT
MONITORING SYSTEM FOR THE HEALTH DISTRICT

PART A: REFERENCE VARIABLES (DENOMINATORS)

Indicator(*)	District	HC1	HC2	HC3	HC4
1. Target population •total •pregnant women •women (15-49 years) •infants (0-24 months)					

PART B: PUBLIC HEALTH DATA

Indicator(*)	District	HC1	HC2	HC3	HC4
2. Geographic accessibility					
3. Availability of essential drugs					
4. Cost recovery (operating costs)					
5. Regular supervision					
6. Utilization of curative services					
7. Hospitals: -capacity -utilization					
8. Coverage rate of ante-natal care					
9. Care of risk pregnancies in %					
10. Assisted deliveries in %					
11. Complicated deliveries in %					
12. Family planning: Contraceptive prevalence					
13. Coverage rate for child care					
14. Immunization rates					

PART C: MORBIDITY AND MORTALITY DATA

Indicator(*)	District	HC1(**)	HC2	HC3	HC4
15. 10 most frequent diseases in particular: - diarrhoea - respiratory diseases					
16. Other locally important diseases e.g. - malnutrition - schistosomiasis - cholera - onchocercosis - AIDS - iodine deficiency (goitre) - eye infections.					

Table 5: Draft monitoring system for the district management level. Data may vary or additional data may be required in some countries. The data set should be used flexibly and adapted to local conditions. A. Kielmann et al (Assessing District Health Needs, Services and Systems) provides valuable information on data survey methodology.

(*) see additional information below

(**) HC = Health Centre

Comments on recommended indicators
(see also GTZ/ITHÖG Indicator paper, Eschborn 1991)

1. Target population

The size of the population to be covered, either in the whole district or the individual services, is an important denominator. The delimitation of a health district is usually a controversial political decision because frequently not only health criteria, but also personal interests of individuals and groups are involved. The population (and specific target groups) in the community served by a health centre (HC) is either officially defined or agreed upon between the HC and the population. As the established catchment areas often overlap, adjustments may be necessary at a later stage.

2. Geographical accessibility

The percentage of the target population of the district or of one service living within 5 to 10 km (or living, for example, at 1 hour's walking distance) of the health facility.

3. Availability of essential drugs

For example, number of weeks per year in which the listed essential drugs are available at the given facility. Indications on how to implement random sample surveys can be found in: A. A. Kielmann et al: Assessment of District Health Needs, Services and Systems.

4. Cost recovery

The extent of recovery of operating costs in the entire DHS (or individual health services) through: income, the budget of the health authority, donor organizations, the community, user fees, expressed in percentages ("pie graphs"). It is a good indicator for the degree of self-financing, and consequently the dependence on external sources of finance.

5. Regularity of supervision

Number of supervision visits per health centre per year or the rate of executed to scheduled supervision visits.

6. Utilization rate of curative services

Number of new cases (first treatments) per year divided by the number of inhabitants in the target group. No target figure is given because the average number of disease episodes per inhabitant cannot be standardized. Based on experience, WHO assumes a rate of 1.0 as an indicator for sub-Saharan Africa.

7. Hospitalization

In addition to the number of beds per district, the number of hospitalizations per month, or: the bed utilization rate, or: the duration of stay in hospital (or combinations of these).

8. Coverage rate for ante-natal care

Number of pregnant women consulting the services at least two (or three) times, divided by the overall number of expected pregnancies in the target population.

9. Percentage and care of risk pregnancies

List the risk factors, adapted to the local conditions. Risk pregnancies should receive specialized further care.

10. Assisted deliveries

Percentage of births attended by trained health personnel and/or by traditional birth attendants.

11. Delivery complications

In addition to maternal and peri-natal mortality rates, percentage/frequency of post-partum diseases or postoperative infections after caesarean section and episiotomy.

12. Family planning

Contraceptive prevalence rate in women aged 15 to 49 years or data on the couple months (or couple years) of protection.

13. Coverage rate for infant care

Recommendation: regular consultations should be scheduled, particularly for the first three years of life (until the child is weaned). Five consultations in the first year (linked with immunization dates), four consultations per year in the second and third years, and as needed in the following years.

14. Rate of immunization coverage

Recommendation: Percentage of fully immunized 1-year old children (at least DTP 1-3 plus measles).

15. 10 most frequent diseases

They usually cover more than 80 % of all diseases. Often, statistics are already available.

16. Other important diseases

Registration of diseases of major public health importance, e.g. emerging epidemics, dangerous or neglected diseases.

Once again, reference is made to the publication by A. Kielmann, K. Janowsky, H. Annett: *Assessment of district health needs, services and systems*. 2nd. ed. MacMillan Press, London, Basingstoke (1992) which provides very useful indications on methods to be used and gives specimen check lists for surveys, etc.

2.3 Concept of an integrated DHS

This section synthesizes the recommendations and demands for the development of a functioning DHS, resulting from actual project work.

The DHS is a segment of the national health service and operates on the basis of the national health policy. It should be provided with ample autonomy, particularly in the fields of human resource management, use of funds and planning. It consists of all facilities and individuals delivering health care at the different levels of the district.

The goal of the DHS is to provide a so-called minimum package of curative and preventive services which has been agreed upon in collaboration with the population: in-and outpatient treatment, ante-natal, natal and post-natal care, infant care, family planning and care for the chronically ill.

We generally define two operational levels within the DHS:

- **the primary level** consisting of health centres, dispensaries and similar facilities at community level (including private practices) and
- **the secondary level** with one or several referral hospitals.

The health centres should provide professional back-stopping to other facilities or activities at **village or community level** (health stations, village health workers, traditional birth attendants and healers, health committees).

The "**district management team**" usually consists of at least one physician specialized in public health as responsible manager, an administrator and a senior nurse. On the basis of needs, costs and financing analyses, this team manages and plans the activities relevant to health care in the district, integrating all other senior experts, particularly the responsible hospital physicians.

All private facilities (including pharmacies) should be included in the planning process and support should be offered according to the type, scope and quality of the provided services.

Vertically organized health programmes (immunization, family planning, AIDS control), are to be co-ordinated with the horizontal health care services and integrated as far as possible.

In countries like Benin, Burkina Faso, Cameroon, Madagascar, considerable effort is presently put into the integration of family planning into mother-and-child health/family planning services (MCH/FP). However, many aspects of family planning activities are still not integrated into the system, e.g. communication with adolescents or men.

Community participation in the organization and financing of health care services, usually in joint committees consisting of health personnel and

community representatives, has now become an essential management principle. This right of co-determination includes the health services at primary level, the hospital and the district management.

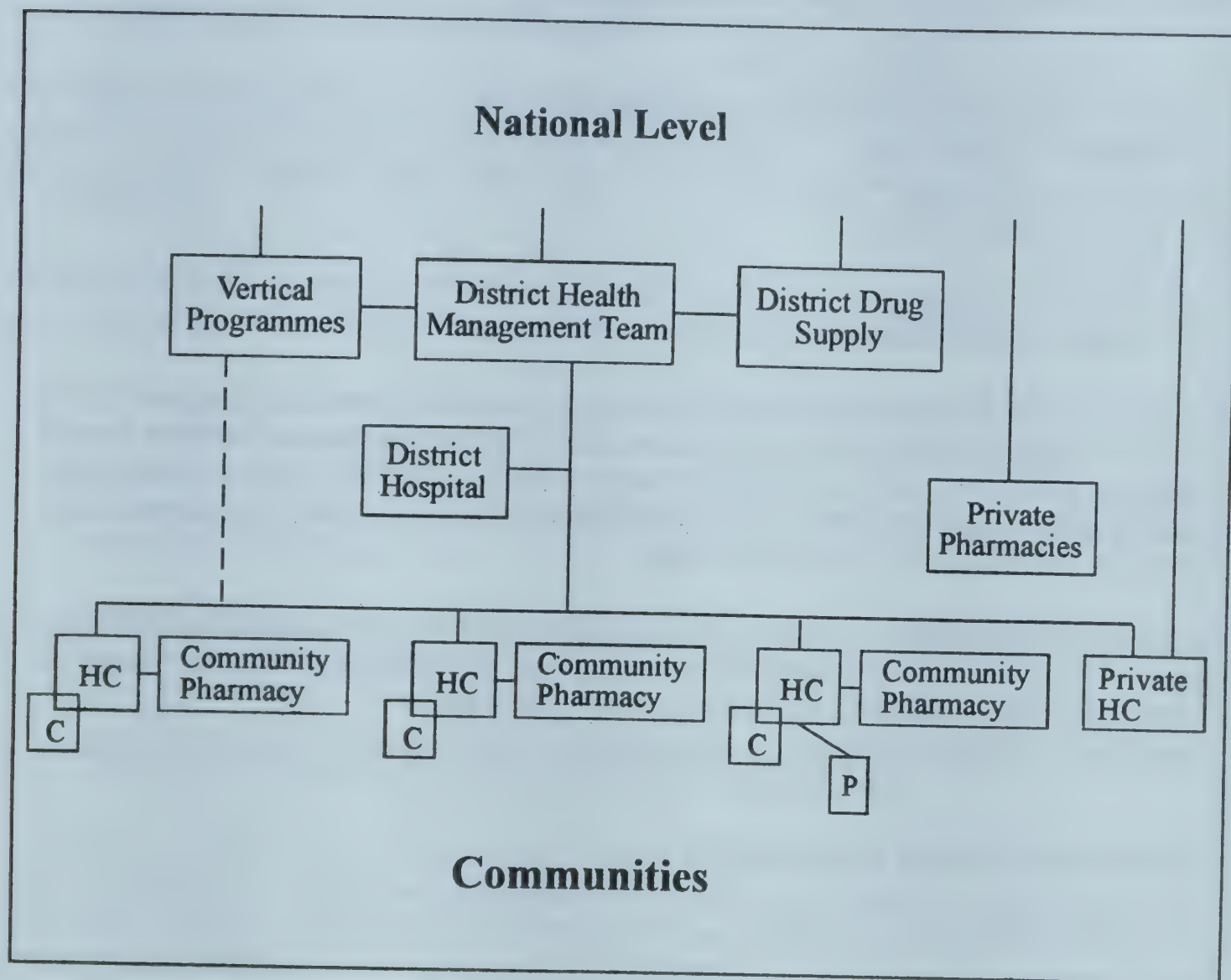


Figure 2: Diagram of a health district. The lines indicate the links usually found.

P = health post with community health workers (now rare, but existent and functional in Tanzania); C = health committee, i.e. co-determination committee in the health centre (or dispensary); HC = health centre, but could also refer to other similar services at the primary level (e.g. pharmacies).

The essential features of the district health system are therefore:

- decision-making power on use of funds and human resources;
- a minimum package of curative and preventive services at two operational levels;
- integration of vertical programmes;
- institutionalized community participation.

2.4 Establishment of a development plan for the DHS

The overall planning for the DHS is done by the district management and should include at least the following individual plans:

1. health service distribution plan;
2. task description of the health care services;
3. health care planning;
4. financial planning;
5. personnel planning;
6. logistics.

2.4.1 Health service distribution planning

In order to assess the quality and quantity of the existing health services and to calculate future needs, reliable information must be available on the target population and its needs, housing and living conditions, the accessibility, availability and capacity of the services. Data on demographic and other socio-economic trends have to be incorporated.

Census data (although out-dated) are usually available. Sometimes, suitable and required data might be available through other development programmes, and sometimes, targeted surveys may have to be undertaken.

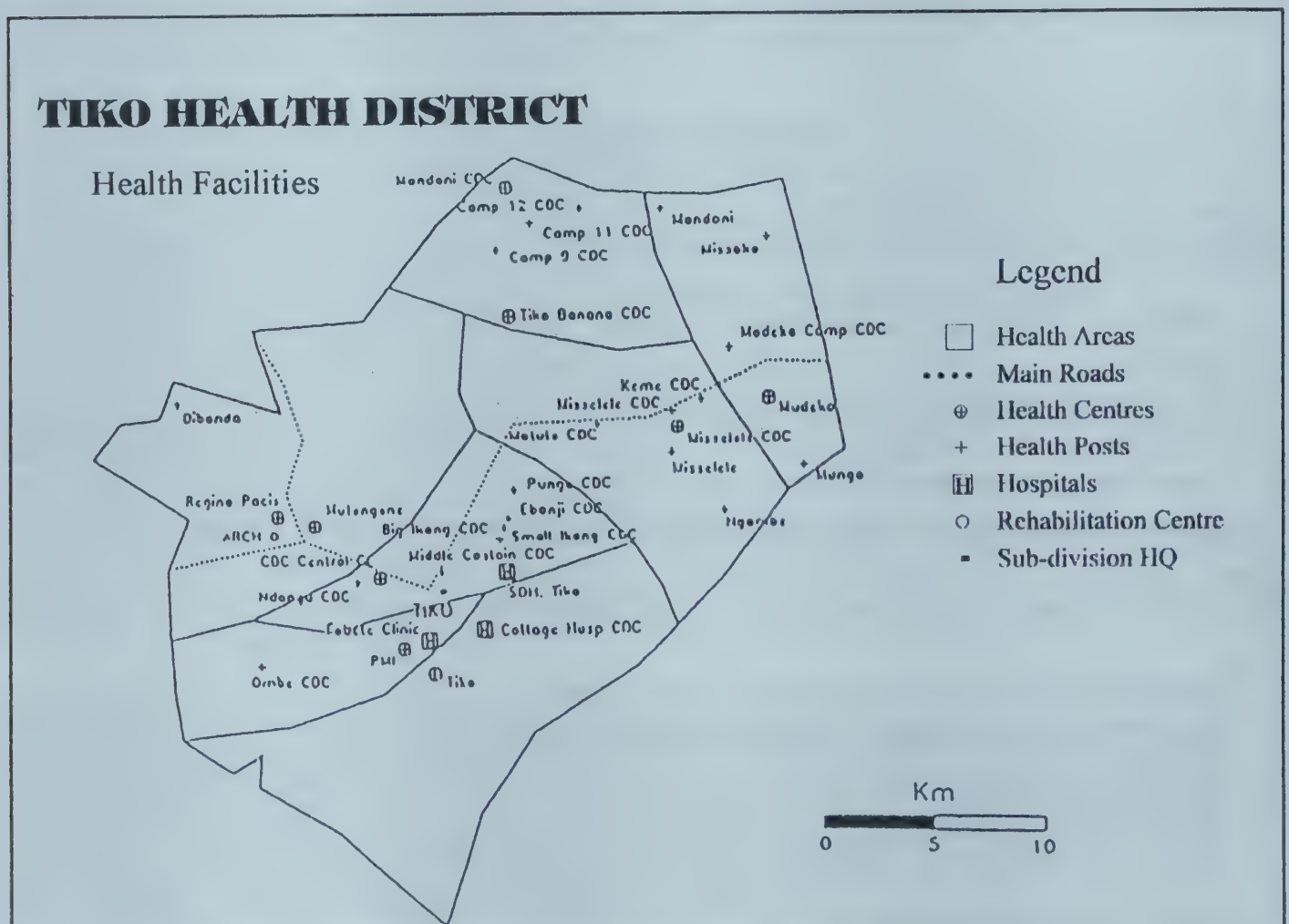


Figure 3: Simplified plan of the health district in Tiko, Cameroon, indicating the health services, the sub-sectors and the main routes. No indications are given on population figures, distances and smaller routes.

When establishing the number of health services, their size and equipment, national planning has to be taken into account wherever reliable plans are available. One health centre can be assumed to provide reasonable coverage for 10.000 inhabitants in urban areas and for 6.000 inhabitants in rural areas. The ratio usually used for a 100-200 bed hospital is 1:200.000 inhabitants.

The district management team, and indeed any health service, should procure or prepare a map indicating all the structures, settlements, distances and population data within the targeted area. This map may facilitate planning and monitoring considerably.

When starting up operations in a new health centre, several conditions have to be met which are indispensable if the centre is to function on a sustainable basis:

- The target population should reliably indicate its willingness to participate and to take on responsibility. To establish this attitude, meetings and in-depth discussions must be held in the communities. The community should participate at least in financial control and, if possible, also be involved in planning and management.
- The health personnel should be sufficiently prepared for the new tasks. They must receive at least 6 weeks practical and theoretical training.
- The health centre should be regularly supervised by a qualified supervisor who examines both the quantity and quality of the services.

The speed of developing new centres should be geared to the fulfilment of the above conditions. Ministries or external funding organizations, often exerting pressure to achieve quick results, must be made aware of the importance of the above prerequisites.

Examples of preparatory training measures (from GTZ-assisted projects) in re-oriented health services or in a health district:

Central Region/Togo: 6-week preparatory course for nurses to work in so-called integrated health centres, 9 modules:

PHC policy in Togo/Bamako Initiative/PHC in the context of community development/Functions of the health centre/Rationalization of curative care/Essential drugs/Application of diagnostic and therapeutic models/Financing of the health service/Community participation.

South-west Province/Cameroon: 1-week introductory workshop for physicians to prepare for work in DHS, 6 modules:

Policy of re-orientating PHC in Cameroon/Community participation/The population under Care/Supervision/Resource management/Drug management/The centres' responsibilities for provision of care.

2.4.2 The duties of the health care services

An important feature of the integrated district health system is an exact description of the all the tasks to be carried out at the different intervention levels. This avoids over-laps and assures a more rational use of scarce resources.

A well-functioning referral system (see B. 4) is a further prerequisite for the services at different levels (village workers, health centres, hospitals).

A detailed written job description of each workplace in the facilities should be drawn up and handed out to each staff member. Standardized diagnosis and therapy guidelines are important tools which help to decide whether responsibility should be referred to the next higher level of care.

The following duties can be identified:

Health centre/dispensary

- * curative care of acute and chronically ill patients not requiring medical attendance (as a rule, 80% of all curative and preventive cases);
- * ante-natal care;
- * obstetric care;
- * family planning;
- * infant care (including immunizations and growth monitoring);
- * community promotion (primary preventive activities, in particular drinking water supply, waste disposal and sewage, professional support of traditional birth attendants and village health posts).

Hospital:

- * out-patients;
- * management of emergencies and "medium level" interventions (obstetrics, surgery including traumatology, urology);
- * conservative treatment of the critically ill;
- * diagnostics requiring sophisticated technology (radiology, ultra-sound, laboratory);
- * training (including health centre personnel);
- * studies and operational research;
- * participation in supervision of health centres;
- * maintenance system (for the entire district).

District management team:

- * planning and management of the DHS including budget planning, control and staffing;
- * technical management;
- * organization of supervision;
- * organization of training;
- * securing drug supply;
- * operational research;
- * intersectoral cooperation.

2.4.3 Operational planning

Annual work plans are essential. They are usually based on the results of an in-depth analysis of the problems, goals and resources over an extended period.

The plans should be as simple as possible, the person responsible for each activity and the set dead-line should always be clearly indicated. The table below has proven effective in a number of DHS projects:

Health District XY: Plan of Operation 1993			
Anticipated result 1		Indicator	
Activities	JFMAMJJASOND	Responsibility	Remarks
1.1			
1.2			
1.3			

Figure 4: Simplified model of a plan of operation. This model is used in the setting of ZOPP (objectives-orientated project planning), although other OP models follow a similar procedure.

2.4.4 Financial planning

Analysis of costs of the planned activities, with respect to available resources, has to precede the planning process.

2.4.5 Personnel planning

The requirements in professional and support personnel should be defined and an inventory taken of the personnel available. The conditions for personnel transfers have to be examined and training carried out wherever necessary. Details are given in Part 4 (Human Resources Development).

2.5 Organization of administration

The prerequisites for an efficiently managed district health service are a clear **description of the tasks** of each institution and, above all, personnel which is well prepared and familiar with the duties and the work flows involved. Target oriented planning systems like those introduced by international aid organizations (e.g. "logical framework" or GTZ's ZOPP i.e. objectives-oriented planning system) can form the basis for such a description of tasks.

The administrative regulations must be transparent and accepted by the personnel. Staff should be supported in the organization of its work load by **instructions and descriptions** for:

- the integration of curative and preventive services;
- co-determination of the community representatives in financing administration;
- the objective of home visits, procedures to be adapted etc.;
- drug supply etc..

The **administrative tools** should be simple, effective and easy to control:

- cash-book(s) with regulations on who keeps keys (usually 2 persons);
- financial book-keeping (with regulations concerning signatures);
- supervision register;
- health committee register;
- registers of the individual services (outpatients, pre-natal care, child care, chronically ill, laboratory tests, home visits etc.);
- reporting forms.

An example of administrative tools for cash accounts in a health centre in Loubomo/Congo is given in Annex 5.

The **administration is controlled and supported** in regular supervisions of the health services (see also Section 2.6), and the following committees:

- district management team;
- committee of all heads of service;
- committee of all physicians and supervisory personnel.

2.6 Supervision

In order to assure quality services and administration, regular supervision of the health services at close intervals (e.g. once a month) is essential. But "old-fashioned" supervision, i.e. controlling of registers, bookkeeping and/or provision of medical consultations should be avoided; new approaches are necessary.

2.6.1 Objectives and contents

The overall objective is to provide professional back-stopping for the personnel and to ensure continuous training. A mere control of the administration is of secondary importance.

The supervisor does not come as a teacher or controller but as advisor and partner. Lectures are replaced by exchange of experience. The aim is to strengthen the medical, technical and communicative skills of the personnel. A relationship of confidence should be built up between the supervisor and his/her staff.

2.6.2 Methods

Unannounced visits have proven to be very useful, particularly if the personnel seems to be unreliable or not committed enough. Surprise visits offer a good opportunity for change. Scheduled visits can be fixed when a relationship of greater trust and confidence has developed. The visits should be carried out on a regular basis; one visit per month is an often recommended interval, preferably always on the same day. Sufficient time should be allowed for the following tasks:

- gathering of information from the staff and listening to questions;
- observation of the ongoing work;
- discussion of the strengths and weaknesses of the work involved;
- training;
- control of administration;
- inspection of the facilities and equipment.

It is advisable for one supervisor to cover a health centre over a longer period. The working tools used, such as diagnosis and therapy guidelines, list of essential drugs, cash book, book-keeping records, etc. must be available.

All recommendations and important and interesting observations to be discussed during the next supervisory visit should be written down in the supervisory journal. Another possibility would be to complete a form which can be analyzed centrally. However, the usefulness of such additional administrative work should be critically reviewed. An example of a supervision form from the South-West Province, Cameroon, is given in Annex 6.

In addition to the chief district physician, all physicians (particularly general practitioners) working in a district and/or experienced senior nurses should carry out supervisory work. This not only enhances a better distribution of workloads, but gives hospital physicians the opportunity to become more familiar with the living and working conditions in their catchment area. Therefore, it is desirable that a hospital physician devotes one day per week (or every two weeks) to public health issues.

The supervisors, headed by the chief district physician, form a team that draws up a schedule of duties and tasks. Ideally, they should meet regularly.

2.6.3 Costs

In principle, costs for supervision should be met by the health centre as part of its operating costs. They could be settled as a fixed lump sum or as a percentage of turnover which is transferred to the district management or retained at source. The question of whether the supervisor and driver receive daily allowances, in addition to their transport costs (gasoline, depreciation), is a policy decision to be taken by the district management.

However, in view of the heavy resource constraints of many health services at primary level, the health authority is ultimately responsible for the financing of regular and reliable training and support at the centres and the amounts needed should be included in the budget allocations to the districts.

2.6.4 Monitoring and Evaluation

Monitoring is based on the data in the supervisory journal (kept by the health service) and/or the supervisory forms (kept by the supervisor) using the indicators set down in the monitoring system of the DHS (see Chapter 2.2). Additional surveys are necessary when more in-depth evaluation is required.

Regular meetings of all supervisors help to exchange and evaluate experiences and draw conclusions. The validity of the monitoring data can then be verified. Occasional surprise visits should supplement regular supervision activities.

2.7 Studies and operational research

The preparation, implementation and evaluation of studies and research are important tasks of local staff members under the responsibility of the district management. Scientific back-up should primarily be offered by national instead of international institutions (universities or non-governmental organizations) with the aim of strengthening local expertise.

Research and studies are needed on:

- priority health problems;
- acceptance and utilization issues;
- barriers against family planning;
- knowledge and attitude of health personnel.

Research should concentrate on application orientated research and operational research/action research. Such activities are essential in developing appropriate solutions, particularly on issues concerning social behaviour. Research could, for example, cover:

- models of co-determination;
- fee calculation systems;
- methods to integrate vertical health programmes into horizontal health services;
- methods to raise the awareness of risk behaviour (risk pregnancies, unwanted pregnancies, adolescents at risk of STD's/AIDS and drugs).

2.8 Intersectoral cooperation

Societies are usually divided into sectors for administrative or political reasons and such divisions often completely ignore the target groups: families do not think in sectoral terms! Although the importance of intersectoral cooperation for development has been stressed repeatedly, implementation of such intersectoral cooperation leaves much to be desired. An apparent inability to implement intersectoral cooperation can be observed at all levels - from the community up to the ministries. It seems appropriate, therefore, to increase the search for the causes of this phenomenon and to turn down our anticipations for such cooperation to very modest first steps.

Intersectoral cooperation is primarily concerned with the following: social issues, education (schools are an important platform for the education of young people and children on AIDS/undesired pregnancies etc.), water supply, sanitation and agriculture. Spontaneous forms of cooperation, of varying intensity, can often be observed but they are usually non-committal and non-lasting.

Examples for pinpointed (but unfortunately not yet institutionalized) cooperation between the **health and water sector**:

Loubomo/Congo: In cooperation with the communities, the two sectors jointly identified priority sites for pumping stations and wells.

Kissidougou/Guinea: In cooperation with an agricultural project, latrine units were manufactured and distributed.

The objective should be a viable and binding cooperation both at district and community level.

Regular meetings of the sectoral representatives, can ensure a constant flow of information and may represent a platform for the preparation of joint projects.

On district level, such cooperation must be initiated and organized by the political authority. Often enough, a committee already exists, but the representatives of the individual sectors do not demonstrate sufficient commitment.

The opportunities for intersectoral cooperation are usually more frequent at community level; here again, the local leaders must assume the initiative.

2.9 Integration of the private sector

The health district incorporates all activities necessary to maintain health and provide care, independently of the overall authority or the range of services offered. The private sector comprises all non-governmental providers of care: hospitals, health centres, private physicians, traditional healers, pharmacies, etc. The number of suppliers and the range of services offered increases with the degree of urbanization.

These private-sector suppliers can be divided into:

- church organizations;
- public utility organizations (e.g. cooperations);
- profit-oriented institutions and individuals.

Private practices, in order to be able to survive, must to be profit-oriented; they can, nevertheless, contribute positively to universal health care coverage.

In order to integrate the private facilities, information must be available on the number and type of services offered. On the basis of such information, their contribution to health care services and the addressed target groups can be evaluated.

District management planning must take these private facilities into account and involve them in the discussions. Difficulties and some resistance can be expected because their competence and responsibility have never been questioned before, and they may never have been subject to regulations. Experience shows that official assistance and back-up from the community, ministry etc. is of considerable importance.

Integrating private pharmacies into the system of essential drug supplies in generic form will naturally meet strong resistance, because not only does it touch on the profit-oriented interests of the individual drug seller but also on that of the entire pharmaceutical industry and its lobby in the developing country. Compromise solutions have to be found which assure the continuous availability of essential drugs but nevertheless allow trade-mark drugs to be sold. Here again, official support from the health authority is extremely valuable.

The role of traditional healers and birth attendants is quite different to that of the suppliers mentioned above because they are an organic part of the given ethnic groups and communities, and their cultural tradition. It is not easy to integrate them into a modern administrative system imposed from outside. The first steps should take the form of cautious contacts, without any legal regulations. Only the co-ordinated strengths and limits of both health systems and mutual recognition on this basis can generate fruitful cooperation.

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3. RATIONALIZATION OF THE HEALTH SERVICES (PRIMARY LEVEL)

- 3.1 Communication with the target population
- 3.2 Operational planning
- 3.3 Infrastructure and equipment
- 3.4 Staffing
- 3.5 Referral system

3.1 Communication with the target population

The health centre plays a focal role in the concept of the health district. Its principal task is to communicate with the population on the existing health problems and dangers and the potentials for treatment and prevention. The centre is the first contact (interface) between the health service and the population. It is estimated that some 80% of all cases can be treated in the health centre and only about 20% require hospital treatment.

Ideally, communication is initiated by the health personnel getting to know "its" defined target population and the prevailing living and working conditions. Home visits and talks may be necessary to this end; during these, all potential patients are registered and classified in the card index (determination of denominators). This type of local census has already been practised in several projects (e.g. Congo, Zaire, Cameroon). This approach no doubt requires high inputs of technical backstopping.

To ensure continuous communication, the corresponding committees and regulations then have to be set up (see Chapter 8 - Co-determination). Supervising this type of communication, i.e. regular contacts with the community representatives, is an important task of district management.

3.2 Operational planning

Every sick person must have access to **permanent** (i.e. day and night) care. The health personnel, however, must be protected against abuse or overwork, by limiting access out of regular hours to the seriously ill or to people who have travelled long distances. For this purpose, on-call regulations have to be introduced. During outreach assignments, e.g. home visits or immunization campaigns, the functioning of health centre operations and staffing must be assured.

Integrated curative and preventive care should be offered, i.e. optimally, they can be provided simultaneously (e.g. treating a sick mother **and** immunizing her child). Risk cases should be identified and referred for further care.

To keep **waiting times** as short as possible, patient flows must be studied and designed to optimal effectiveness. In many cases, administrative procedures can be considerably reduced.

Job descriptions have to be exact and available in written form.

Work regulations and instruments (duty rosters, therapy protocols, book-keeping, etc.) must be available in writing and be clearly explained to the personnel. Initiation courses, as in Togo may serve this purpose (see Chapter 2.4).

The **duty plan** (staffing roster, task scheduling, work times and workplace) must be drawn up on a monthly or three-monthly basis in cooperation with the involved persons. It should be pinned up for all to see.

3.3 Infrastructure and equipment

In order to identify the minimum requirements, an initial inventory has to be taken of the buildings, available utilities (electricity, water, etc.), the fittings and medical equipment. Alternatively, the official plans can be used.

Subsequently, any additional infrastructure or equipment must be identified, after comparison with the description of the facility's tasks. The financial resources of the district, the given logistic situation (e.g. supply of operating inputs), the maintenance and repair potentials have to be taken into account. Negotiations should be held with the district management and the community on the necessary procurements. These should be based on standard equipment plans which usually already exist but often are far too ambitious. They should be adapted to the conditions of each district.

3.4 Staffing

There is frequently a lack of sufficiently qualified personnel. The available personnel must, therefore, be polyvalent and able to work in **different activities**. Clear job descriptions help to avoid overlapping responsibilities and promote team work. A maximum number of staff should be capable of carrying out specific activities (e.g. home visits, health education, etc.).

To organize staffing assignments appropriately, the analysis of the **work load** per staff member/team/or service unit is the first step. Schedules should be prepared on the actual and target capacities of the individual service, the trends in supply and the work input (in time) required per service (see Table 2)

A spirit of competition within the team should be avoided at all costs. Regular team meetings should be held. Agreed work plans should be handed to the personnel (see also Chapter 5.1).

3.5 Referral system

The technical aspects of a transfer to the referral hospital can only be satisfactorily settled in cooperation with the target community. The chief aspects to be regulated are **transport** and **financing**.

Wherever there is no ambulance vehicle available, alternative solutions have to be identified (vehicles belonging to the community, traders or taxis).

Financing should be clarified in advance. The following modalities are possible:

- referral costs are included in the consultation fees;
- costs are split amongst the community, the health facility and the patient;
- ambulance savings accounts are set up with regular contributions in order to cover costs in full or in part.

The hospitals should treat transferred patients at preferential fees, although this requires a financing concept which includes free treatment or special fees for these patients (e.g. health zone Bamanda, Zaire, see reference literature).

The re-transfer of patients to the peripheral centre is to take place as soon as possible as this considerably lowers costs for the individual patient and for the overall system.

Standardized forms and an efficient exchange of information are further requirements for a well functioning referral system. The district management is to co-ordinate and test such referral systems.

The Antwerp Tropical Institute, the GTZ Health Division / Eschborn, the GTZ-assisted project in Congo, the Tropical Institute Rabat / Morocco, and the Swiss Urban Health Project in Djamena /Chad jointly implemented an operational research project on behalf of the European Union, aiming at defining the modalities for regulations that will raise the awareness and functional relationships between the services (and consequently staff) at the primary levels and at the referral institutions. This referral system does not simply cover the transfer and re-transfer of patients, it also covers the information system, the financing system and the interaction within the district team. First reports are expected in 1994.

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4. THE DISTRICT HOSPITAL

4.1 Conceptualisation and definition of tasks

4.2 Infrastructure and equipment

4.3 Staffing and personnel qualifications

4.4 Organization and administration

4.5 Financing

4.6 Information and feedback

4.1 Conceptualisation and definition of tasks

4.1.1 The concept

The traditional hospital continues to see itself as an independent institution, equipped to the highest possible technical level, employing the maximum number of physicians and specialists, and with a large bed capacity.

The district hospital, on the other hand, is an institution within a comprehensive system of care, the health district. Its role is dictated by the distribution of tasks within the district. It complements the facilities of the primary level, the health centres and dispensaries, where, in optimal conditions, more than 80 % of all cases can be treated.

A distribution of tasks of this kind requires close co-ordination and cooperation, particularly with regard to the information system, personnel qualifications, the supervision system, the referral system and the financing system.

The "new" role of the integrated district hospital also implies that it recognizes the district management as its superior, coordinating instance. The hospital director still retains responsibility for hospital operations and the budget and should be a co-decisive member of the district management team.

4.1.2 Definition of tasks

The terms of reference for the hospital are matched with the tasks of the health centres: their structures should be mutually complementary. Overlap of services only entails additional costs (see also Chapter 2 Planning and Management).

Proposed description of services:

- emergency and general surgery (obstetrics, surgery including traumatology, urology);
- conservative treatment of serious illnesses;
- sophisticated diagnostics, requiring specialised technical and personnel qualifications (x-rays, ultrasound, laboratory);
- basic training and upgrading for personnel from all district facilities;
- studies and operational research: not only on clinical topics but focusing also on public health issues in the district, e.g. the role and functionality of the district hospital;

- cooperation in supervising health centres;
- out-patient care;
- maintenance of the hospital and the health centres.

The quality of services provided and the hospital's reputation decisively influence the economic viability of its operations.

4.2 Infrastructure and equipment

To be run cost-effectively, the typical district hospital should have at least 100 but not more than 200 beds. This size allows for optimal efficiency of investments provided the bed-utilization rate lies between 50 - 80 %. This, in turn, can only be expected when services of acceptable quality are offered. The following measures must be taken in order to satisfy a minimum standard:

- inventory of the buildings and supply installations (electricity, water, sanitation and waste disposal), other installations and medico-technical equipment;
- needs assessment;
- negotiations with the district management teams and community representatives on financing options;
- establishment of an appropriate repair and maintenance service (see also Chapters 3.2 and 9).

Further details on inventory methods and needs assessment in: A. Kielmann et al.: Assessing district health needs, services and systems, published by MacMillan Press Ltd., London & Basingstoke 2nd. ed. (1992).

4.3 Staffing and personnel qualifications

The present staff situation is to be analysed, and additional requirements with different qualification levels should be calculated taking into account the range of services offered by the system; the findings are then to be discussed with the district management team and/or the ministry of health.

Job descriptions and duty instructions promote more effective work flows. Duty rosters should be established together with the persons involved and pinned up in a public place. Regular work meetings (at least weekly) improve work organization, communication and operational processes and strengthen the team spirit (see also Chapter 5: Human Resources Development).

Personnel upgrading measures should be organized as systematically as possible. In-service training can be carried out (as regularly as possible) by hospital personnel and supplemented by theoretical training. Combined practical and theoretical training should also be offered to the staff of the health centres. Possibilities for external training courses should be identified and implemented wherever possible. Management personnel in particular should receive targeted training in the various areas of public health (e.g. organization and management of health services, health management information systems, financing systems).

4.4 Organization and administration

Hospital organization is carried out by a management team usually consisting of the medical director, the administrative director, the senior nurse and possibly heads of other departments.

In view of the shortcomings in the organization and administration of district hospitals and the future challenges (e.g. through the financing system), great importance must be placed on a competent and efficient administration. Medical personnel need to be relieved of such duties either fully or to the maximum possible extent, although they should continue to be involved in decision-making processes.

Targeted training must be available for administrative staff. In an era of computer technology, computer-assisted methods can be useful, not only in urban areas, but also in district hospitals.

In the Hôpital Secondaire in the Urban District of Bè / Lomé / Togo, the hospital administration (invoicing, book-keeping, store-keeping, information systems) has been computerised. Two Togon administrators received the necessary training and a Togon computer specialist provides technical supervision. However, in view of the present conditions in Togo, it is very uncertain whether this promising approach can be continued.

All administrative methods and instruments (e.g. book-keeping, storage, co-determination on financial issues) should be co-ordinated with the district management in order to ensure that standardised methods are applied throughout the district and the entire health sector. Health economists and/or administrators should be asked to provide advice and training.

Regular **working meetings** of the entire personnel and also of the individual professions (e.g. physicians) are of major importance.

In the Malanville district hospital in Benin, the physicians and heads of department meet each morning to discuss the events of the previous night, the anticipated workload for the day and other general issues concerning health care services.

Work regulations, duty instructions, terms of reference etc. must be explained to all staff members and be available in writing. An important principle to be applied to regulations and activities is that all arrangements and agreed procedures are always **transparent** and easy to understand.

4.5 Financing

A district hospital with its relatively high personnel and operating costs cannot, of course, be financed exclusively from user fees. The superior health authority must not only provide capital costs (of buildings and utilities) but also medium to long life equipment (medical apparatus).

The extent to which operating costs are covered by income from user fees must be established and which other sources of income have to be used. Micro-economic and sociological analyses need be carried out for this purpose.

Wide-scale standardisation should be achieved by co-ordinating fees with the district management team and with those of other health centres. Reduced fees should apply for patients transferred from the health centres so that excessively high treatment costs will not jeopardise necessary further treatment at the hospital. These subsidies should be financed within the scope of the overall district financing system. This is a further proof that financial contributions by the health authority remain indispensable.

4.6 Information and feed-back

The hospital reporting system is an integral part of the district information system. When patients are transferred, the hospital must provide feed-back information to the transferring structure on the illness, its cause and further recommendations (see also Chapters 2.2 and 3.5).

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5. HUMAN RESOURCES DEVELOPMENT

5.1 Staff allocation

5.2 Training and continuing education

5.3 Motivation

5.1 Staff allocation

Above all, the efficiency of a health service depends on its personnel.

The number, qualification and allocation of staff for the district should be thoroughly planned. Skew distributions should be avoided. Both over and understaffing disturb work flows. Financial incentives should be offered for working in remote or otherwise unattractive health facilities. Provided the self-administered budget allows for it, the hiring of local support staff should be considered.

Following negotiations with the World Bank in July 1993, the government of Burkina Faso set up revised minimum standards for health personnel in the various health facilities

CSPS (=dispensary)

3 persons (2 nurses,
1 auxiliary)

CM (= large health centre without
operating theatre)

11 persons (1 physician,
5 nurses/midwives,
3 auxiliaries, 1 secretary,
1 all-round technician)

CMA (= small hospital)

23 persons (2 physicians,
13 nurses etc)

Details are given in Annex 7

Appropriate and regularly paid salaries, needs-adapted equipment, some autonomy and a clear job description contribute considerably to high staff performance, satisfaction and efficiency (see 5.3).

5.2 Training and continuing education

Professional capacity, cooperative behaviour, motivation and empathy towards patients are criteria to be met by good staff members.

Training should be based on the priorities in the given district/country; international (usually European) standards should be critically assessed as to their validity and applicability in the African setting. The eight principles of the PHC strategy are suitable guidelines for instruction (see Table 1).

In many countries, nursing schools and universities are currently revising out-dated training curricula, adapting them to present needs; at this stage, there is a potential for the implementation of an appropriate change.

As the hospitals are primarily responsible for all training measures in the district, they should be empowered to organize courses and practical training.

Short training courses of several days' duration covering specific subjects held in the district for small groups are particularly successful. Topics might include:

- family planning education;
- care of risk pregnancies;
- the basics and methods of communication;
- AIDS control.

Once again, the importance of regular supervision is stressed, particularly in the context of training (see also Chapter 2.6).

In the South-Western Province of Cameroon different introductory and training courses are offered:

- for community representatives (Inter Village Health Committees): a three day introduction to the goals and tasks of participation (see also Annex 8);
- for staff of community pharmacies: courses on their role and practical aspects;
- for personnel of the health centres: courses on the role and organization of the centre's activities within the district;
- for physicians: courses on the role and organization of the health district.

5.3 Motivation

Unfortunately, insufficiently motivated staff is a frequently encountered problem. Many different factors influence motivation; among others: education, personal experience, current values, recognition and conditions at the work place, career prospects. Efforts to improve motivation must therefore address this issue from its various sides.

- Payment must at least cover the living expenses of the staff member and his/her family. When this is not the case, even highly motivated staff is forced to take on sideline activities while being on- or off-duty in order to support their families.
- The potential for the introduction of performance-related salary allowances should be investigated. The awarding criteria and the amounts involved should be established by the personnel in cooperation with representatives of the target population. These allowances should be funded out of the budget for operating costs.
- Provision of accommodation by the community, possibly the construction of new houses.

- Under or overcharged personnel does not perform efficiently. The assigned jobs should correspond to the staff member's capacities.
- The workplace must meet minimum standards (above all, provision of essential drugs) and clear working regulations must be established (job descriptions, duty schedules, treatment guidelines).
- Delegation of tasks raises the sense of responsibility.
- Involving staff in basic surveys and operational research encourages their creativity and responsibility.
- Praise in non-monetary form, e.g. letters of recognition, press reports on the work of high performance staff, possibly with photographs.
- In most countries, career planning is still the exception, as appointments and transfers usually follow their own laws. Nevertheless, suggestions like the possibility to undergo further training, retransfer to the capital after years of service in remote facilities etc. might be appropriate.

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6. FINANCING SYSTEM

- 6.1 The concept**
- 6.2 Socio-economic conditions in the population**
- 6.3 The health service and the community:**
 - 6.3.1 Economic and financial analysis**
 - 6.3.2 Budgeting**
 - 6.3.3 Rationalization**
 - 6.3.4 Organization and administration**
 - 6.3.5 Co-determination (financial control)**
 - 6.3.6 Modes of payment**
 - 6.3.7 Fee schedules**
- 6.4 Drug supply**
- 6.5 District management tasks**

6.1 The concept

At least three major conclusions have been drawn from the large-scale collapse of rural health care in many developing countries :

- centralized, free health care is very costly, inefficient and not sustainable on a long-term basis;
- deficient financial planning and management and lack of control by the users lead to waste and misuse;
- the state as being ultimately responsible, should maintain or increase its financial contributions to the health services.

6.1.1 The goal

The new financing system to be introduced aims at:

- delivery of improved services at affordable prices;
- equitable access to health care for all.

6.1.2 Principles

To achieve this, attention should be paid to the following principles:

The Principle of Cost Recovery:

In economic theory, cost-recovery is achieved when the price of a product includes its manufacturing costs and the profit. In the social sector, the attempt at cost-recovery should include all available sources of finance i.e. public funding and income from user fees (co-financing). As cost recovery measures should already have been included in the planning process; the services are

subsequently obliged to perform economically and in awareness of the costs involved. This, in turn, promotes the rationalization of the services and cost containment without loss of quality.

The Principle of Cost Sharing (Solidarity Principle)

The simplest form of cost sharing is an equal split of costs between employers and employees.

However, the principle of solidarity reaches further: through fee differentials or higher contributions to an insurance scheme for the better-off or by sharing the cost of care between the healthy and the sick.

The Principle of Cost Saving (Economic Efficiency)

The economic use of capital goods to ensure the provision of health care without loss of quality. Experience shows that the health sector offers a large, unused potential for rationalization.

6.1.3 Methods

- a. **To ensure sufficient funding** all available resources must be tapped. The following possibilities can be considered:
 - increased public funding;
 - contributions by the community;
 - user fees;
 - rationalization of services;
 - contributions by external donors.
- b. **The introduction of economic planning and management** requires the use of measures and tools to enhance cost recovery, cost sharing and cost saving. It should include training in basic financial management, budgeting, book-keeping, bank accounts, controlling etc.)
- c. **Rationalization, i.e. cost saving without loss of quality**, is probably the most effective method to improve the financial situation of the health services. The main rationalization approaches are:
 - the systematic application of the essential drugs policy;
 - performance-related staffing (reduction of surplus personnel, improved staff allocation in line with qualification);
 - limiting irrational use of equipment (e.g. excessive x-rays, laboratory services, infusions);
 - effective co-determination and control of income and expenditures by representatives of the population (after proper training);
 - rational planning, procurement and use of consumables at all levels (only through good supervision);
 - integrated supervision to replace duplicate, uncoordinated supervision of individual services (EPI, MCH etc.).

- d. **Budgeting and permanent controlling of the budget** is the most important tool in financial planning. On the basis of cost and financing analyses, the budget identifies the necessary expenditures and available resources for the next planning period. On-going control is essential for the identification and correction of discrepancies at an early stage.
- e. **The transparency of financial administration and its control** must be assured by regulations of co-determination.

The above mentioned principles and methods introduced to improve the financing system address all levels: the individual health service, the district health system (DHS) and the entire health sector.

The following refers only to the DHS and its individual health services.

6.1.4 Political framework

A prerequisite for the introduction of a financing system into the DHS which is cost covering, cost sharing and cost saving is that the district be given legal financial sovereignty (i.e. responsibility for the use of funds is delegated to the district management and the health services). Income from user fees should no longer be transferred to the central treasury but retained and re-used in the district.

Considerable political resistance must be overcome in order to decentralize financial decision-making and administration of funds and to delegate them to the health sector at district level. However, several African countries (e.g. Burkina Faso, Guinea) have already introduced such strategies. In other countries, governments have commissioned GTZ assisted projects to implement financial decentralization in pilot studies (e.g. Madagascar, Benin).

Community co-determination in the organization and financing of health service should be clearly regulated, defining the rights and duties of both the community representatives and the health personnel. In the past, failure was mostly due to inexact descriptions of the rights and tasks of the co-determination committee, although hidden personal conflicts, corruption and a general lack of motivation undoubtedly also had an impact.

Benin approved exemplary statutes for co-determination committees at community and district level (see Chapter 8 - Community Participation and Annex 8).

The introduction of user fees (already widely practised) should either be officially legalized or be a research task within a defined project. Exemption mechanisms or payments in kind for indigent patients must be agreed upon in collaboration with the communities.

These are major social and political decisions which can hardly be influenced at district level. The best approach is to collaborate with the Ministry of Health in the

development of appropriate and acceptable guide-lines and solutions that can help convince decision-makers of the necessity and feasibility of the planned systems.

6.1.5 The Complexity of planning and implementation

Financing of the DHS is very complex and should always be viewed in the context of the other planning and management tasks (see also Chapters 2 to 9).

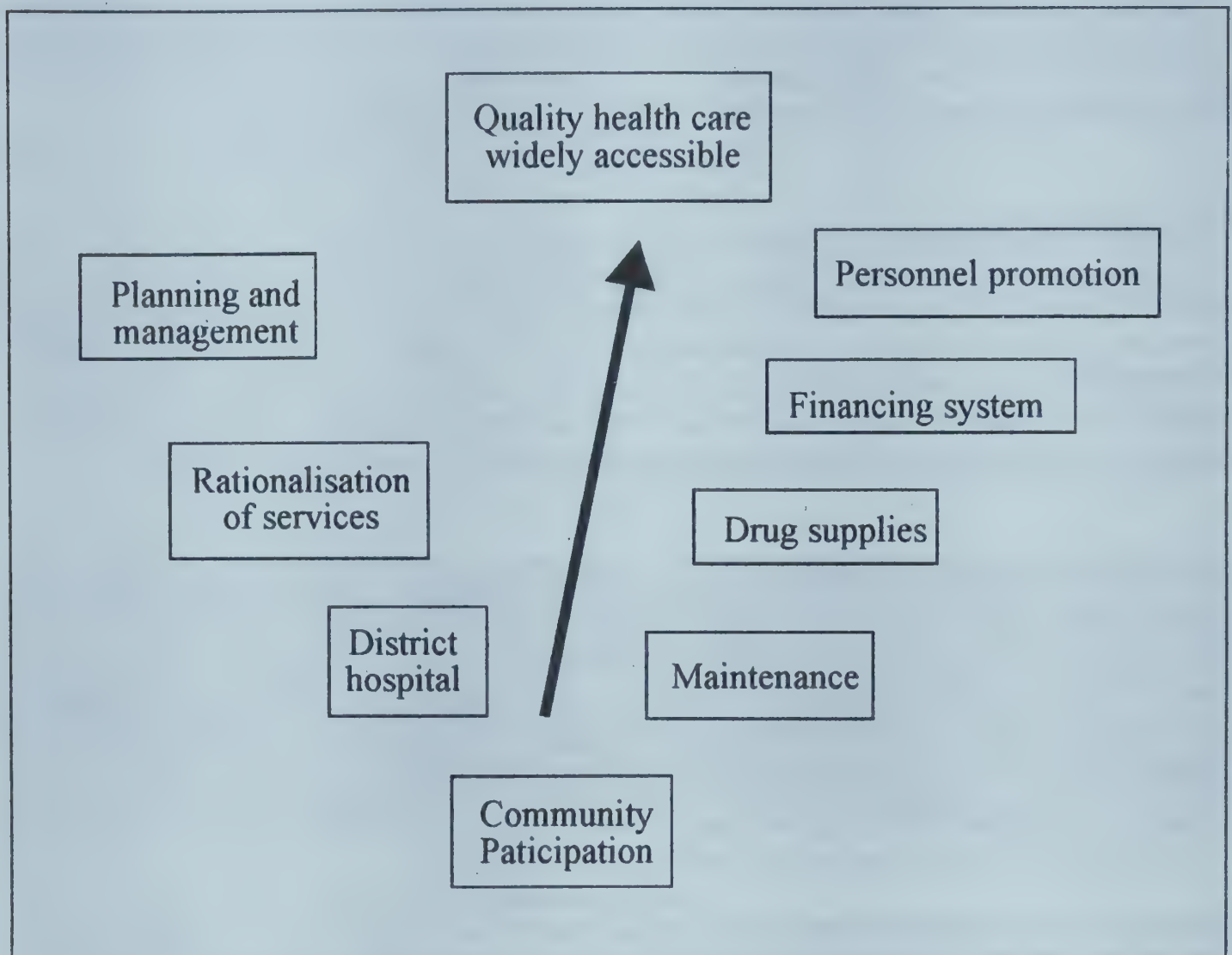


Figure 5: Complexity of spheres of action in the health district

Numerous important economic and sociological analyses and testing of alternative solutions should precede the introduction of new regulations like payment schemes (operational research). If the population is directly affected by such activities it should be involved from the outset - starting from preparatory investigations to the actual decision-making. Otherwise there is no guarantee for approval and cooperation.

6.1.6 Cost categories

A clear distinction should be made between **capital costs**, i.e. investments borne by the health authority (government, churches, private sector) or by external donors, and **operating costs**, split between the users, the community and the health authority.

Investment costs	Operating costs	
	fixed costs	variable costs
construction	salaries	drugs
infrastructure	electricity	consumables
equipment	water	transport
vehicles	depreciation	training

Table 6: Overview of cost categories in a health service

The following will concentrate almost exclusively on operating costs which should be covered by the country's own national resources independently of external donors. There is no doubt, however, that most African countries continue to be dependent on external aid to cover investment costs.

6.1.7 The flow of funds in the district

Schematically, funds in the health district flow in two cycles. One is concerned with drug supply, usually separated from the other costs, the second cycle comprises all other operating costs.

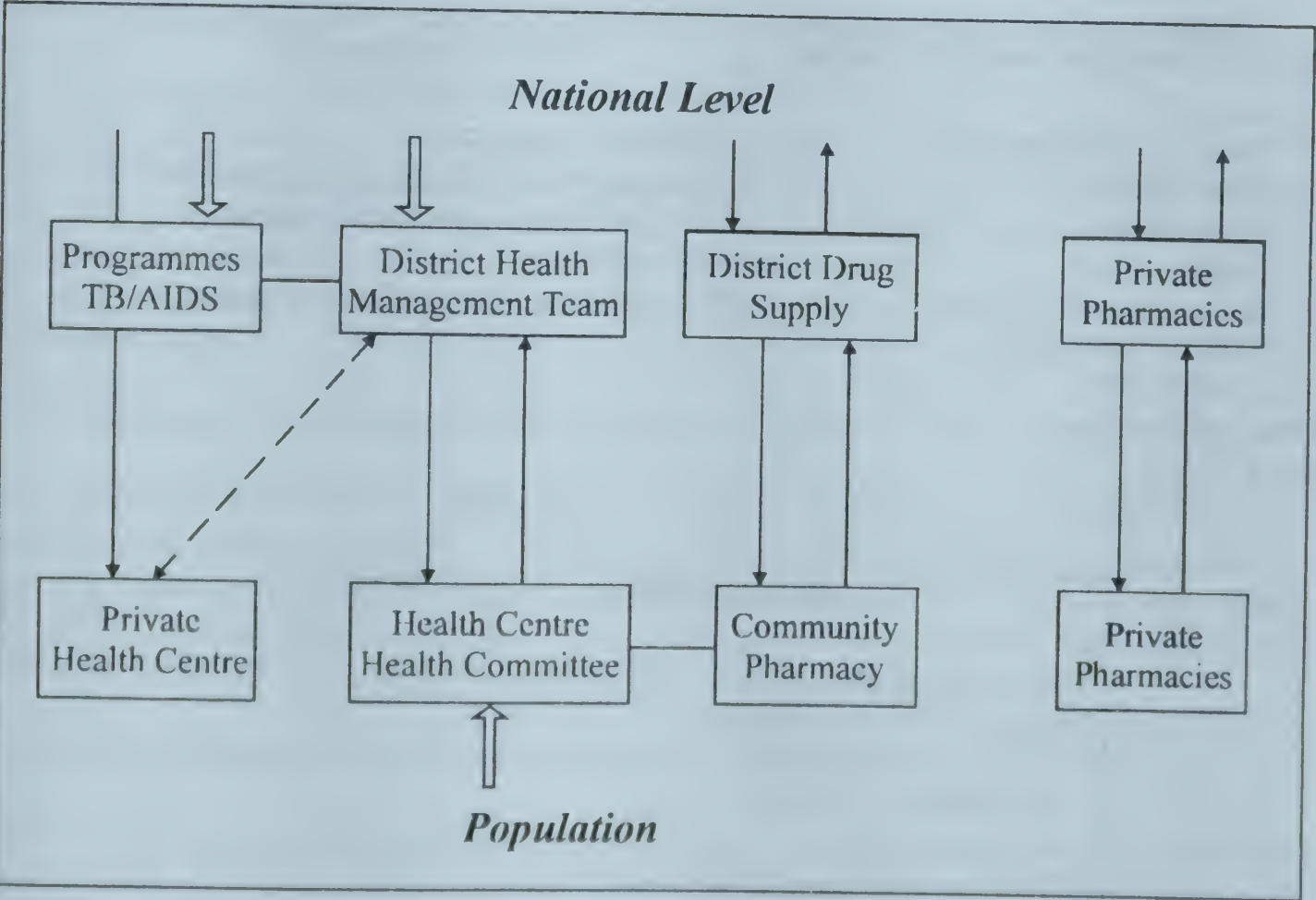


Figure 6: The financing system in the health district. The arrows indicate the flow of cash or valuables in two different cycles. Frequently, private and church facilities receive funds directly from the central level or from external donors.

6.1.8 Key issues and problems in financing the DHS

Experience shows that answers and solutions must be found to a number of key issues and problems regarding the implementation of appropriate approaches and the understanding of social and economic conditions in the district.

For operational reasons, these issues can be divided into four groups although they are closely linked. Studies and surveys can address these issues separately.

Key Issues and Problems in Financing the DHS

<div><div><div><div>4. District Management<ul style="list-style-type: none">* Legal Framework* Organization and Administration* Technical Assistance to Health Centres and Communities* Training* Action Research* Involvement of the Private Sector</div></div></div></div>	
<div><div><div><div>2. Health Services and Community<ul style="list-style-type: none">* Analysis of operating costs* Financial Analysis* Cost Recovery* Budgeting* Rationalization of Services* Financial Administration* Co-Determination* Modes of Payment* Price Fixing</div></div></div></div>	<div><div><div><div>3. Drug Supply<ul style="list-style-type: none">* Legal Framework* Diagnosis and Therapy Guidelines* Organization and Administration* Price Fixing* Involvement of the Private Sector</div></div></div></div>
<div><div><div><div>1. Population<ul style="list-style-type: none">* Purchasing Power* Expenditure on Health* Type of Health Care* Availability of Cash* Insolvency* Preferred Mode of Payment* Self-help Organizations</div></div></div></div>	

Table 7: Overview of key issues and problems to be addressed or solved if the financing system is to meet the needs of both the population and the health service.

6.2 Socio-economic situation in the population

6.2.1 What is the monetary and non-monetary income of the households?

Methodologically difficult, as reliable data can hardly be expected. Moreover, families often have multiple sources of income from jobs, farming, contribution by family members. Household surveys will provide only very approximate data.

6.2.2 What percentage of income is spent on health/illness?

This is extremely valuable information for the structuring of fee systems. Recent surveys demonstrate that 5 to 15 % of the annual household income is spent on health. Absolute figures vary considerably from country to country and between the rural and urban population.

6.2.3 On what type of health care is the money spent?

This is a good indicator for the appreciation of the provided services. Apart from modern health services, there are traditional healers and private practices of varying competence and finally all sorts of self-medication including procurement at local drug sellers.

6.2.4 Is cash available in times of illness and how quickly can it be procured?

Studies in Rwanda and Togo have shown that in 40 % of acute cases of illness no money is available. If prepayment is required for medical treatment (i.e. no granting of credits) interventions are often postponed. Frequently, the necessary sum can be raised in the family and sometimes sickness funds, particularly for members of self-help groups can help. Recent studies have shown that the necessity to raise money can take up to three days, thus delaying treatment ("patient's delay").

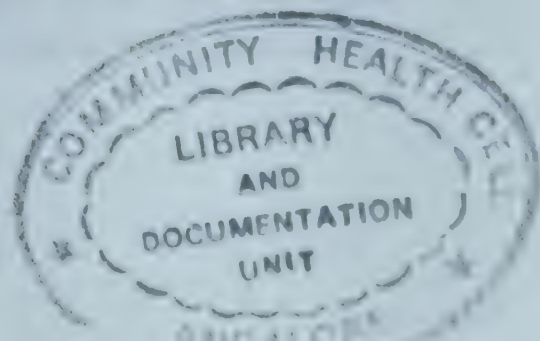
6.2.5 How many households are unable to raise money for treatment and why?

The rates are 5 to 15 %, differing from country to country and within a given country, and rising constantly. **Occasional insolvency**, frequently at the end of the dry season should be distinguished from **permanent insolvency**, often concerning social problem cases. Apart from insufficient income, conflicts within the family to bring about a decision may also play a role.

6.2.6 What payment scheme is preferred for health care?

Poverty increases scepticism towards all forms of solidarity (lump sum payments per episode of illness, pre-payment schemes). Therefore, sufficient information and communication is needed on the advantages of such schemes. The implementation of pre-payment schemes should rely on the increased ability and willingness to pay during and after the harvest. The acceptance of newly introduced payment schemes depends largely on their transparency and on the use of funds.

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6.2.7 Are there self-help groups, what type, how many?

Existing everywhere, their numbers increase rapidly in times of economic constraints (e.g. Rwanda). Their size, terms of payment, services and risk coverage are often similar. There are also revolving saving funds; members receive fixed sums to be used as they wish (e.g. the "tontines" in francophone Africa).

6.3. The health service and the community

The health centre with its corresponding community form a functional unit. The economically sound performance and sustainability of the health centre depends on jointly established solutions and forms of co-determination. The same economic principles apply to hospitals although co-determination should be more comprehensive than at community level.

6.3.1 Cost effectiveness and financial analysis

Analysis of efficiency and financing is essential for the health centres, the hospitals and for the district management (e.g. for the entire health district). It includes:

- **analysis of the actual operating costs:** broken down into fixed and variable costs in the different operational areas and activities (curative and preventive care, administration etc.);
- **analysis of expenditures;**
- **analysis of all revenues, considering all sources of finance;** with particular attention to "hidden" incomes.

These analyses allow the determination of

- **the extent of cost recovery** through income from user fees, community and public funding plus external aid. On the basis of this information, it is possible to deduct the **degree of self-financing** and **dependency** on external funding.

The analysis of expenditure indicates the direction of the flow of funds and the structure of expenditures. It identifies discrepancies and potentials for rationalization. Personnel expenditures usually account for 50 to 70 % of the costs (with rising trend), drugs are the second largest item.

Breaking down the expenditures per activity is an important tool for economic evaluation and calculation of the rate of cost-recovery of each individual department. Activities can be broken down into:

- curative care (out-patients, hospitalization, obstetrics, chronically ill);
- preventive care (ante-natal care, child care, immunizations, family planning;

outreach activities (home visits, IEC-activities, etc.).

Income				Expenditure		
1.	Government	104,470	54.6 %	Personnel	113,685	59.4 %
2.	Patients	52,381	27.4 %	Drugs and vaccines	36,747	19.2 %
3.	Community	4,741	2.5 %	Supervision	11,483	6.0 %
4.	UNICEF	8,527	4.5 %	Transport	7,847	4.1 %
5.	GTZ	15,942	8.3 %	Office material	6,125	3.2 %
6	Others (missions)	5,328	2.8 %	Equipment	7,847	4.1 %
7				Maintenance	7,655	..4.0%
Total		191,389	100.0%		191,89	100.0%

Extent of cost-recovery through income from
patients = 27.4%
patients and communities = 29.9%
public funds, patients and communities = 84.5%

Table 8: Simplified analysis of operating costs of the health system in the Préfecture Kissidougou/Guinea 1990.

Analytical book-keeping is a suitable tool for the simultaneous recording of costs, costing structures and costs per activity. The following simplified example is taken from studies carried out in Guinea (Dr. H. Werner and Dr. B. Galland). See also Annex 11.

Category	Total	Administr ation	Labora tory	Consult ation	Pre-natal care	General Medicine	Mainte nance
Personnel Incentives Transport etc.							
Drugs							
Consumer goods							
Hygiene							
Maintenanc e etc.							
TOTAL							
Total per activity							
Total per department							

Figure 7: Example of an analytical book-keeping of hospital operating costs in Bè-Lomé/Togo, 1992 (according to H. Werner and B. Galland)

6.3.2 Budgeting

Budgeting is preceded by financial planning which determines the framework of expenditure in the coming year. The budget fixes the maximum expenditure for each cost category/cost unit and is the most important instrument of financial planning. It incorporates all income and expenditure, whether in monetary or non-monetary form.

The **budget targets** and the **actual budget** expenditure must be regularly controlled. Discrepancies between these two figures indicate the financing gaps. District management, hospitals and large health centres are obliged to establish a budget and monitor it on an on-going basis. The district management is responsible for the budget of smaller facilities (e.g. health centres with a target population of 10,000 inhabitants) as the required personnel input would be excessive.

Book-keeping is the main controlling instrument for an on-going recording of income and expenditures.

6.3.3 Rationalization

Potential sources of rationalization, i.e. cost saving, are mainly based on the above mentioned analysis. Experience has shown that rationalization (above all rational use of essential drugs in generic form) can generate considerable savings in operational costs without loss of quality; often enough, quality will actually improve.

The most promising approaches to rationalization are listed under section 6.1.2.c.

Clinical picture	before (trade mark drugs)	after (generics)
Children with cough and diarrhoea	6,922	2,500
Women with malaria and general exhaustion	7,700	1,500
Bacterial infection (antibiotics!)	25,5356	3,600

Table 9: Example of rational drug prescription from Mahajanga/Madagascar (1990). 1,000 Francs malgaches = 1 DM. The rationalization impact is generated both by using generics and by the prescription of fewer drugs.

6.3.4 The organization and instruments of financial administration

To be accepted and put into practice, these instruments must be easy to understand. Training and backstopping for staff must also cover the use of these instruments. They include:

- budget planning;
- book-keeping with the corresponding register;
- establishment of a cashier system (separate for consultations and drugs) with cash-books;
- establishment of fee schedules and their publication;
- opening of a bank account with regulated access;
- control regulations (e.g. double signatures and official appointment of the person in charge).

6.3.5 Co-determination (financial control) by the community

Community participation in the form of co-determination on financing and audit is absolutely essential for a functional and sustainable health service. Longer term experimental phases are usually necessary before agreement can be reached on the clearly-defined rights and duties of both the community and the health service.

The form and contents of co-determination should be legalized within a foreseeable future, the speed of implementation being a good indicator of a government's commitment to decentralization.

A GTZ-assisted health project in Cameroon (North-West, South-West and Littoral Provinces) has founded a non-profit organization to operate drug supply and other services (e.g. maintenance): the Provincial Special Fund for Health - PSFH. A successful and transparent system of control by the community has been set up. Following several years of operational research and numerous adjustments, the government now intends to introduce this model countrywide.

See also Chapter 8: "Community Participation in Health Care".

6.3.6 Mode of payment

The modes of payment influence the implementation of the principle of solidarity, particularly ensuring access for the poor.

A wide range of approaches exists:

a. Fee for service based on the actual cost of each individual service/drug (prescribed).

This approach ignores equity. Because of its transparency it is, however, usually well accepted. It is often too expensive for the poor.

b. Lump sum payment per consultation/drug (prescribed) based on actual costs.

This is a first step towards the solidarity principle, because compromise prices can offset the difference between expensive and cheaper services.

c. Lump-sum payment for the entire episode of illness including drugs.

This mode of payment fully corresponds to the solidarity principle: The amount is derived from the average total cost per episode of illness. Its success depends on a relatively well developed sense of solidarity within the healthy target population. "Co-financing" of the sick" can lead to problems in the acceptance of the scheme. Other possibilities are lump-sum payments per episode of illness, differentiated according to severity (minor, serious and chronic cases).

d. Pre-payment schemes

This mode of payment already exists in various forms, for longer periods (usually 6 to 12 months) and for different services. Its introduction should be preceded by large-scale information campaigns, as poor people in particular can hardly accept to pay for something in advance. The pre-payment scheme can provide treatment either free of charge or at reduced rates. It can cover the individual or his/her entire family.

e. Health insurance systems

This is the widest organizational form of risk insurance and solidarity. Its successful introduction depends on several pre-conditions, above all:

- the participation of large, preferably homogenous groups of the population, e.g. all employees of one or several companies or the entire civil service;
- the existence of a monetary income in the participating population;
- the functionality of communal structures;
- the provision of health services of acceptable quality.

Most African countries are currently testing mixed forms, combining fee-for-service schemes with lump-sum fees. The pre-conditions for health-insurance-schemes are still missing, particularly in rural areas.

Country	Per visit/ drug extra	Per episode drug extra	Episode/ drug included	Health insurance or pre-payment
Benin	X (1)			
Burkina Faso	X (1)			
Cameroon		X (1)		
Congo			X	
Guinea	X			
Madagascar		X (1)		Insurance OSIEM (2)
Mali	X			
Rwanda	X			
Togo	X (1)			Insurance MUSAM (3)

Table 10: Modes of payment practised or tested in 9 projects (according to Cissé/Görgen 1992). (1) On trial; (2) OSIEM = Organisation Sanitaire Interentreprise du Mahajanga; (3) MUSAM = Mutuelle de Santé de Mères à Bè

6.3.7 Fee setting

The structure of fees must take into account both the economic needs and the economic situation of the target population (purchasing power, seasonal fluctuation of cash availability, willingness to pay). It is the economic situation of the population which ultimately decides upon the extent of cost recovery through user fees. Standardized fees should apply at least for the entire district and be published and pinned up for all to be seen.

The introduction of fees for curative care can follow the following practical guidelines:

- a. **Lump sum fees for consultations**, covering running costs partly or in full;
- b. **Fees for drugs** (prescribed) preferably for the entire episode (possibly with an upper time limit), based on actual procurement costs.

Preference should be given to lump-sum contributions and the pre-payment schemes as they represent advanced forms of solidarity and are easier to manage. On the other hand, they are more difficult to implement (see 6.3.6. Modes of payment).

Ticket category	Treatment	Fee
A TICKET (nurse)	- consultation adult/week	150
	- consultation child/week	50
	- school visit/week	50
	- laboratory	200
	- antenatal care	200
	- child care/ year	200
	- obstetrics	200
B TICKET	- consultation by physician	
	* adult per week	200
	* child (under 6 years) per week	100
	- laboratory	400
	- delivery	500
	- delivery, no antenatal care	1000
	- hospitalization	
	* adult per week	1000
	* child per week	500
	- surgery (1st. week)	2500
	- medical certificate	200
	- treatment of tourists	2000

Table 11: Example of consultation fees (per week) in Bandiagara / Mali (1991). 1 DM = 168 FCFA.

With regard to fees for drugs, experience has shown that cost recovery can be achieved by the rational prescription of essential drugs, even at relatively low prices.

Country	Number of drugs per prescription	Sales price of drug	Average cost per episode in DM
Benin	3.2	PP x 3	2.20
Burkina Faso	1.5	PP x 3	8.77
Cameroon		PP x 3.08	11.74
Congo	2.1	PP x 1.80	2.71
Guinea	3.01	PP x 2,50	1.53-1.76
Madagascar	1.95		9.75
Mali	2.3	PP x 2.50	2.94-4.53

Table 12: Average quantity of drugs per prescription and average cost per episode of illness. Source: Financement du district sanitaire - où en sommes nous? GTZ, (S. Cissé, H. Görgen, 1992). PP = purchasing price

Frequently, the introduction of standardized fees entails cost savings for the patients who previously were skinned by lavish prescriptions and unofficial fees. On the other hand, user fees can also create financial obstacles deterring potential clients, particularly if the quality of care offered is insufficient.

In collaboration with the communities, exemption mechanisms have to be sought for indigent patients. Most regulations to date have been unsuccessful, having lead to abuse, e.g. certificates of "poverty" entitling to free treatment. Community funds or loan systems may be an alternative (see also section 7. Community Participation in Health Care).

6.4 Drug Supply

Drug supply plays a central role in the financing of district health care, as drugs constitute approximately 3/4 of treatment costs. See also Chapter 7.

6.5 District management tasks

District Management is responsible both for the concept and practical application of the financing system. Its relationship with the national level and also with the individual health services in the district plays an important role.

6.5.1 The legal framework

The legal framework is, of course, established at national level, although the district can positively influence this cumbersome and slow procedure. Pilot projects, for example, operated with the authorization of the Ministry of Health, can help to develop exemplary solutions on district level. Experiences made should be shared with decisionmakers in the Ministry of Health.

6.5.2 Organization and administration

Administrative regulations, covering monitoring and audit in particular, are to govern the management in the health district. The district management team with its chief administrator in the first place must receive appropriate training in financial management.

6.5.3 Technical assistance to the health centres and the communities

is an ongoing district management task and comprises advice and control (supervision) on both medical and administrative issues in developing community-based financing systems.

6.5.4 Training

The district management should organize training in financial management both for the health centres and for the management team.

6.5.5 Parallel action research

This is of basic importance for the acceptance and sustainability of the entire system and should cover appropriate methods of payment, administration, co-determination etc.

6.5.6 Involvement of the private sector

The district management (supported by the Ministry of Health) should initiate or strengthen activities to incorporate above all private pharmacies and church-operated health services.

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7. DRUG SUPPLY

- 7.1 Essential drugs policy: Concept and legal framework**
- 7.2 Rational drug prescription**
- 7.3 Organization and administration**
- 7.4 Pricing**
- 7.5 Involvement of the private sector**

7.1 Essential drugs policy (EDP): Concept and legal framework

The goal of the essential drugs policy is the rational use of essential drugs in generic form instead of many different, expensive and unnecessary trade mark pharmaceuticals. Rational means limiting prescriptions to a minimum amount of lower cost drugs of the same efficiency. Not only does this practice bring about cost savings, it also avoids the consumption of too many drugs and their potential side effects.

Essential drugs are those with proven effectiveness which have been rated indispensable but also sufficient to treat all diseases (with a few rare exceptions). The list drawn up by the WHO contains approximately 245 drugs. While the full list suffices for regional and district hospitals, it is too comprehensive for health centres, dispensaries etc. and should be adapted to the specific tasks of the services. For a model list from Cameroon see Annex 9.

The essential drugs policy is not limited to the distribution and sale of bulk-pack generics at low prices but also involves a package of measures to assure its successful application:

- establishment of separate drug lists for each activity level;
- organization and administration of the supply circuit;
- standardized strategies for diagnosis and treatment (D&T);
- personnel training and education of the population;
- incorporation of the private sector.

As the EDP collides with the "free" trade of trade mark drugs, source of profit for the pharmaceutical industry, private pharmacies and individuals, its application can be expected to raise considerable resistance.

In this context, clear policy decisions and appropriate legislation on the liability of the EDP, procurement and distribution of the drugs at national level, approval procedures for trade mark drugs etc. become all the more important. The existence and implementation of legal regulations are an indicator of the government's commitment to the EDP.

The district management should influence the establishment of the appropriate legislative framework by informing the ministry on tested regulations and further proposals for application.

7.2 Rational drug prescription

Standardized diagnosis and treatment guidelines (D & T guidelines) are the basis for rational prescription practices; they must be adapted and followed according to the given health priorities of each country. Above all, they have been developed for the paramedical personnel in health centres. Intensive training and ongoing technical backstopping (supervision) are necessary before the D & T guidelines are accepted and applied by the personnel writing prescriptions.

Locally developed D & T guidelines are already in use in several countries and DHS projects. Basically, they all follow the same structure:

1. **from symptoms to diagnosis and treatment:**
The user selects the leading symptoms according to their medical significance. The individual diagnosis and treatment steps are subsequently indicated in detail.
2. **the clinical picture and its treatment:**
Clients are treated with essential drugs; when appropriate, traditional medicine can be incorporated.

An exemplary D & T handbook has been developed in **Mahajanga/Madagascar**. The handbook is bilingual (Malagasy and French) and has been corrected and adjusted in the light of practical experience over the last two years. It is now to be introduced countrywide. An excerpt from the handbook is given in Annex 10.

The correct use of D & T guidelines brings about four major advantages:

1. Drugs are used rationally, polypragmasis is avoided.
2. Serious cases (meningitis, extra-uterine pregnancy) are recognized early enough to be referred in time.
3. Records based on D & T guidelines illustrate a differentiated symptomatology. The analysis of these records gives a true picture of the epidemiological situation in the catchment area of the centre.
4. D & T guidelines can be a good basis for training activities and supervisory visits.

Studies on the average costs of drug treatment and the number of drugs prescribed per episode give valuable indications on the prescription practice of the health personnel and highlight possible rationalization approaches through training and improved supervision. Data on rational drug prescription are also given in Table 12, Section 6.3.7.

7.3 Organization and administration

7.3.1 Lists

The WHO essential drugs list containing all pharmaceuticals required for the entire health sector, forms the basis for a country's drug stocks.

Specific lists must be drawn up for each level of intervention, adapted to the defined range of activities of these facilities (e.g. health centres) and thus indicating which drugs may be used (see example in Annex 9).

7.3.2 Procurement

The district management is responsible for the timely procurement of drugs for all services in the district. Up to now, drugs have been procured by government or parastatal centralized pharmacies. In theory, they were responsible for the provision of drugs to all districts, although in most African countries, for economic and organizational reasons, they were no longer able to fulfil these tasks. The government is, therefore, called upon to secure supplies again, either

- by re-organizing the former central pharmacy to ensure that it operates transparently under public control. Two years ago, Benin has introduced a successful approach ("Centrale d'Achat").

or

- by modifying the statutes of central pharmacies (transforming them into non-profit organizations: cooperatives or associations). A successful example in Cameroon ("Provincial Special Fund for Health") also incorporates private facilities.

Until drug supply is well regulated at national level, the district management is obliged to exploit all possible sources. Under these circumstances, the temporary procurement with the aid of external organizations and direct purchase from international organizations can be advocated. It must be assured, however, that the different suppliers adhere to basic quality control practices.

For two years now, Benin has a reformed central pharmacy operated by a majority of non-governmental shareholders, whose transparently-administered operations assure the supply of essential drugs, without interruption to date, on a non-obligatory basis to the country's health services. The financial balances are positive and its utilization rate is increasing.

7.3.3 Storage

Pharmacies attached to the health services should use a standardized record-keeping system allowing an easy overview of the actual stocks and the monthly consumption of each drug. The comparison with the monthly morbidity statistics allows to control the turnover at any time (supervisory task!). To ensure

uninterrupted drug supplies, the replacement system should take into account the long procurement times.

In many countries, the forms and control system for the drug supply cycle (procurement, storage, distribution, replacement) is already well established. Annex 9 gives an example for the control of stocks in Loubomo/Congo. The best set of forms is useless, however, without a good and reliable supervision (control) of pharmacies and personnel.

An appropriately sized and equipped (refrigerated) store is required to stock drugs at district level. It could be operated by the government, a non-profit or private organization. This should be discussed and tested where applicable.

7.3.4 Distribution and logistics

In principle, each health facility should be responsible for the transport of its own supplies, using locally available transport. Alternatively, the supplies could be brought on the occasion of supervisory visits. Supply intervals should be fixed (every month or every three months) and capacities must exist to cover emergency needs.

The valid drug lists indicate all available drugs. Only actually needed drugs should be ordered. The advantages of supplying prepacked drug kits (as practised by UNICEF) have not yet been fully assessed.

The drug store at district level must have sufficient stocks to be able to overcome national or international supply constraints for a sufficiently long period.

7.3.5 Record-keeping

The pharmacy (at district and community level) must record the stocks of each individual drug and all incoming and outgoing quantities on appropriate forms. Minimum stock levels to trigger new orders must be fixed for each drug (warning system).

The prescriptions or copies of them kept at the pharmacies and the health statistics can be used for control purposes.

7.3.6 Financial control

Responsibility for financial control should be established explicitly. As a rule, the head of the health service (i.e. the head of the health centre or the district physician) is responsible, together with a representative of the community or the district.

Audit is based on the cash records, the bank account records and the pharmacy's stock records (see also Sections 7.3.3 and 7.3.4).

The health centres should be controlled regularly (e.g. monthly) by the district management. The person empowered to do this must be trained in financial management.

7.4 Pricing

The **sales price** of drugs is based on the actual cost of the drug. The **costs** of drugs are calculated on the basis of cost-recovery: the purchasing price plus all operating costs to assure sustainability of procurement (transport, storage, any local personnel inputs, administration, safety margin, quality control, taxes etc.).

This calculation does not include additional charges to finance other activities as proposed in the Bamako Initiative. The sum of the replacement costs indicates the percentage to be added to the purchasing price (= 100 %), e.g. the average sales price in 1991 in Mali was 167 % of the purchasing price (purchasing price = 100 % plus replacement costs: 67 %). This total sum can also be expressed as the **multiplier factor** (see Table 12).

In order to assure compliance and successful treatment and to avoid the development of drug resistance, the total amount of drugs prescribed (larger quantities for protracted courses) should be handed out to the patients., even if some patients may not be able to pay immediately for the entire course. Until recently, only a minority of patients was unable to pay, but experience (e.g. from Tiko/Cameroon) shows that the numbers are increasing.

Price fixing based on the actual cost of each individual drug requires relatively high administrative inputs, but it is well accepted by the patients because of its transparency. It ignores solidarity principles. Exemptions must be considered for insolvent patients in cooperation with the community..

Compensative prices could be fixed to level down the prices of very expensive drugs (e.g. Praziquantel) to cheaper preparations (e.g. eye ointments). This form of solidarity avoids excessive prices and lowers financial barriers.

A standard lump-sum price for drugs for the entire episode of illness or risk period represents an advanced form of solidarity but its acceptance is low, particularly in very poor regions. This lump-sum price is derived from the average price of a large quantity of prescriptions over a long period.

Additional profits from drug sales are obtained by increasing the sales price above cost-recovery level. The generated income could be used to finance other activities or acquisitions. As it is money paid by patients, such decisions should be taken in agreement with the representatives of the community. This is doubtlessly a very attractive solution to finance part of the running costs (compare the "Propharmacie" example in Cameroon), although it does entail some risks.

Mixed financing of activities from different sources (e.g. financing supervisory activities from the profits made through drug sales) can be problematic because only part of the costs can be covered; so that both financing and planning become subject to uncertainty. Such mixed financing schemes reduce transparency in the

use of income and could in turn lead to loss of confidence on the part of the patients.

The attractiveness of generics due to their lower prices compared to trade mark drugs would be reduced, leading to negative impacts on accessibility and acceptance. Book-keeping also becomes more complicated if the revolving fund for drug supplies is used to co-finance other activities.

On these grounds, it is strongly recommended to finance drug supplies through appropriate revolving funds, separated from the remaining running costs. The creation of very cost effective and attractive drug prices represent a significant asset in the light of the considerable resistance to a policy of essential drugs.

Experience has shown that treatment with essential drugs based on rational therapy strategies may generate up to fourfold savings compared to traditional prescription practices (see the exemple from Madagascar).

7.5 Involvement of the private sector

Following the largely negative experiences with a centrally-organized governmental or parastatal drug supply over the last 20 years, many African countries are restructuring their systems. In addition to the foundation of alternative (non-profit) organizations, they are also considering the involvement and promotion of the private sector in the drug supply system.

To date, government and privately run pharmacies have co-existed in an uncoordinated fashion, the number of private pharmacies fluctuating greatly from country to country and between urban and rural districts.

To ensure a sustainable drug supply at acceptable prices, the potential of all suitable facilities (public and private) for contribution should be examined, and incorporated. This applies above all to pharmacies but also to kiosks, markets traders, etc.

Exact studies and negotiations must be undertaken to clarify the extent to which these facilities are willing to contribute to a regional drug supply system and what capacities they can offer (social marketing studies).

An attempt to reach an agreement on the sale of essential drugs in generic form in **private pharmacies** and their pricing should be made. Private pharmacies should be encouraged to adopt the essential drugs policy, even though, at first glance, it seems to contradict their profit interests. Realistically, success can be expected only in exceptional cases. On the other hand, they must be permitted to sell trade brands not included in the list of essential drugs as a supplementary source of income. Whenever possible, pharmacists should participate in such planning.

Other **private traders** (kiosks, market-women) should also participate. Being in charge of important distribution networks in some countries, they frequently possess the confidence of their clients, have traditionally sold drugs and provided advice on their use. Instead of excluding them from the drug sales network, it should be studied if targeted information and training measures facilitate the integration and promotion of their activities for the benefit of a sustainable drug supply system.

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8. COMMUNITY PARTICIPATION IN HEALTH CARE

8.1 Regulating co-determination

8.2 Health-related community activities

8.3 Self-help groups

Co-determination by the target population in the design of the health service is an essential factor to ensure that the health service really addresses the health problems and the living conditions of its target population, adapts its activities to local conditions and resources and, finally, is accepted by its users.

Community participation refers on the one hand to cooperation in designing the (professional) health services and on the other hand to health initiatives in the community itself in which the health services in their turn can cooperate.

It is a well-known fact that the majority of curative and preventive measures can be carried out by the families and the community themselves.

A major factor in obtaining the committed cooperation of the community is the extent to which it can expect to benefit from such activities, e.g. through a water tap which facilitates everyday life.

8.1 Regulating co-determination

The contents and the form of co-determination for health services must be established within the legal framework in cooperation with representatives of the population. Co-determination is a major indicator for the extent to which the decentralization of responsibility and decision-making competence is actually put into practice in the health sector. It is therefore a very important means of political regulation, often accompanied by hidden political agendas and requiring intensive professional backstopping.

Transparency is a basic principle of co-determination: all administrative procedures, particularly monetary ones, must be easy to follow and control. All fees and important regulations must be published, e.g. on visible pinboards at the entrance to buildings.

The optimal form of co-determination may vary from one place to another and should be identified by action research. Experience shows that two factors may cause difficulties:

- the willingness (and capacity) on the part of health personnel to accept co-determination by the community;
- the identification and appointment of community representatives who really enjoy the confidence of the target population.

The **co-determination committee (health committee)**, consisting of representatives of the community and the health centre should have its own officially approved statutes and legal form. Such statutes have already been approved in some African countries (e.g. Rwanda, Benin, Cameroon).

This committee should discuss and decide on the planning and activities of the health services, its income and expenditure and the contributions by the population. The quality of the services is another topic for discussion. Premiums on performance should be fixed or changed in the committee.. The professional supervision provided by the district management committee should also include advice to the health committee. Similar administrative councils should be set up at district level and at the hospital.

8.2 Health-related community activities

Many important health-related activities, which include primary and secondary preventive and curative measures, can only be effective in the long term if they are implemented by the communities themselves. The extent of these activities and their success depends on the socio-cultural context, the socio-political and personal commitment of the members of the community and their leaders, and on the support they receive from political instances and the respective health services.

The communities should at least be responsible for the following activities:

- maintenance of the water supply points;
- sanitation, disposal of solid waste and toilets;
- introduction and supervision of general hygiene measures;
- ante-natal care by community birth attendants;
- care of social problem cases (the poor, single mothers, marginal persons);
- care of the chronically ill (TBC, AIDS, lepra etc.).

In cooperation with the health and social services (and services of other sectors) the following activities are possible and useful:

- targeted youth work (vocational training, control of sexually transmitted diseases, family planning);
- financing of community workers, e.g. to carry out preventive measures (see box below);
- support of specific campaigns (e.g. malaria vector control, bilharziosis, dracunculiasis);
- support of family planning services.

Over the past 20 years such community activities have been organized through semi-skilled lay helpers (village health workers, VHW) and so-called village health posts. However, the services offered by village health workers and the sustainability of such services often failed to meet expectations and their activities today are increasingly being put into question, particularly in the context of cost effectiveness. Therefore, the promotion of VHW activities is indicated only under

specific conditions (see box below). In contrast, the promotion of traditional birth attendants (TBA) has proven to be useful and successful.

Major criteria for the promotion of village health workers:

- inadequate geographical and/or cultural accessibility of next health service;
- demand and genuine commitment of the community (village);
- financing by the community, independent of external sources;
- clear definition of roles and adapted distribution of tasks;
- professional backstopping (supervision) by the health personnel guaranteed.

Other potential providers of community activities relevant to health are, for example, committed individuals, schools, church and NGO-supported initiatives.

In order to increase community activities, the health service can support:

- initiatives and give advice in the health committee;
- joint education and training courses;
- ongoing supervision.

In the case of technical cooperation projects:

- inputs of materials and equipment for water supply and sanitation measures, education and vector control.

8.3 Self-help groups

Traditional saving funds with 20 to 100 members exist in all societies. Their usual common objective is to provide coverage for various risks or material burdens, e.g. births, marriages, disease, death.

In some associations, members receive a specific sum which they can use at will (so called "tontines").

These self-help groups can be of considerable importance for the health services as they assure the financial access to treatment for their members in the event of acute illness.

When introducing cost sharing mechanisms in health care, these traditional savings organisations should be closely studied in view of their performance capacity, acceptance and transferability (see also Chapter 6. "Financing").

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9. TECHNICAL OPERATIONS AND MAINTENANCE

9.1 The concept

9.2 Maintenance system

9.3 Training

9.4 Supervision

9.5 Costs and financing

9.1 The concept

9.1.1 Goal

The goal of technical operations and maintenance for the entire health sector and for the individual health district is to ensure medical care as far as it is dependent on equipment and materials.

The main principle in achieving this goal is to optimize the use of existing technical resources.

9.1.2 Operational level

Technical maintenance of the health services is primarily a management task and to a lesser degree a technical task. Experience has shown that it is best organized similarly to primary health care, within the district health system. This unit is both small enough to reach all health services and large enough to justify the technical inputs needed.

9.1.3 Tasks

The main tasks of technical operations cover:

- procurement and maintenance of general and medical equipment;
- transport of patients and goods;
- energy management;
- maintaining the hygiene standard;
- waste management.

9.1.4 Curative and preventive maintenance

Maintenance is not just limited to remedying damage or breakdowns but comprises above all the prevention of sudden equipment breakdowns and the resulting repair costs.

9.1.5 Methods

Maintenance methods concentrate on:

- inspections (including safety tests);
- maintenance (including calibration);
- repairs.

Systematic and effective maintenance requires the existence of and adherence to written maintenance and repair instructions.

9.1.6 Maintenance steps

The steps to achieve these goals are:

1. the development of a concept adapted to local conditions;
2. training of users (who are the main sources of breakdowns);
3. appointment of persons responsible for maintenance;
4. qualification of maintenance personnel (technicians);
5. establishment of one or several central workshops;
6. establishment of maintenance networks.

These individual stages can only be achieved step by step. Close professional backstopping by national or international maintenance experts is essential.

9.2 Maintenance system

9.2.1 Inventory

The inventory of equipment is not only an administrative instrument of order and control but also the basis for developing technical management. All data on equipment and technical facilities must be recorded, e.g. serial number, year of fabrication etc.

The initial inventory by a specialist must also include additional criteria on the functioning of the equipment. The inventory must be updated on a regular basis and controlled on the occasion of supervisory visits.

9.2.2 Maintenance workshop

The maintenance workshop should be located in or near the district hospital, as this facility requires the largest maintenance input. The workshop should be responsible for all health facilities in the district and be equipped to carry out routine inspections and maintenance and simple repairs in several sectors: electrical engineering, mechanics (including plumbing), welding, electronics and medical equipment, carpentry, minor painting and masonry works. Automobile repair and maintenance may also be included.

A suitable vehicle, preferably four-wheel drive is required particularly for activities in remote areas.

9.2.3 Maintenance in the district hospital

Maintenance activities are systematically planned by the hospital technicians and co-ordinated with their colleagues in the hospital, especially with the equipment operators. Planning is based on the concept of planned preventive maintenance (PPM) and standardized forms are used to be completed regularly. In addition to data on the equipment, the following information is registered:

- spare parts: needs and consumption;
- work input (by the technician);
- equipment downtime and causes.

During the initial implementation phase of the workshop or for periods of heavy commitment, the equipment should be classified according to its importance for clinical operations, e.g.:

- a. utility plants:
 - sterilization;
 - electricity supply (including generators);
 - water, laundry;
 - refrigeration;
 - kitchen;
 - steam, heating.
- b. medical equipment:
 - surgical equipment; syringes
 - anaesthetics;
 - laboratory;
 - ultrasound, x-ray.

Technicians should also instruct administrative and operating personnel (nurses and physicians) in the hospital in the correct and responsible use of equipment and provide advice on all technical issues.

9.2.4 Maintenance in the health centres

The central workshop at the district hospital and its senior technician organize the technical operations of the health services in the entire district. A systematic maintenance work programme should be scheduled, adapted to the needs and special situation of each service.

In addition to ongoing repair work, this entails regular supervision (similar to the medical services), the involvement and co-ordination of local specialists, appropriate instructions and training.

In this system the health centre personnel plays an important and active role as they are to assist in the maintenance of the equipment and also to carry out minor repairs. Wherever possible a maintenance officer should be appointed for each service (support personnel are often suitable for such tasks) who is then trained to carry out the maintenance work involved.

Technical maintenance of health centres, i.e. upkeep and repairs usually covers:

- buildings (roofs, doors, windows etc.);
- furniture;
- lighting and electricity;
- water supply;
- refrigerators;
- laboratory equipment.

Antsohihy / Madagascar (1992):

The Mahajanga Province developed the system of maintenance officers. In most primary-level health centres, these officers were appointed from existing personnel. Their maintenance activities involve trouble shooting on technical problems, finding solutions independently or in co-ordination with the technicians from the central workshop and supervising the implementation of the necessary work. In this way they developed skills which they can also use outside the health service.

Relevant seminars were organized, professional backstopping is given regularly in co-ordination with the supervising physicians.

9.2.5 External maintenance resources

Private companies can be important partners for health services. The services they offer can comprise the sale of consumables (e.g. reagents and spare parts), difficult repairs, and consultancy and training services. In some circumstances the workshop can also be run privately.

Plumbers, electricians, carpenters etc., or specialized firms such as lathe works, motor winding enterprises etc. could be potential private operators. Preventive maintenance (inspection, servicing) can rarely be carried out on a cost effective basis by private companies because this would require the presence of permanent personnel and intensive travelling.

Maintenance work is frequently carried out by other government institutions in the district. The possibility of cooperation with other technical operations should be investigated, for example with workshops of the ministries responsible for agriculture, transport, water supply or energy but also with vocational training workshops and military facilities.

In Anglophone countries in particular, a single ministry - e.g. the Ministry of Works - plays an intersectoral mediating role in this context.

9.3 Personnel

9.3.1 Maintenance personnel

At least one, preferably two trained technicians are required to manage the central workshop and co-ordinate maintenance activities in the periphery of the district. They can be supplemented by support personnel or private craftsmen operating in the district.

The technician(s) should have completed a two-year (or better 3-year) nationally-recognized course in hospital engineering, similar to that offered in Djourbel/Senegal (3 years) or Mombasa/Kenya (2 years). Private enterprise is increasingly becoming involved in such basic training and qualification activities (e.g. Ivory Coast).

A responsible maintenance officer should be appointed for maintenance tasks in the individual peripheral health centre (usually one of the support personnel) and trained in simple maintenance tasks (maintenance officer, see also 9.2.4.).

9.3.2 Operators and administrative personnel

As the equipment operators (especially medical personnel) are the main source of technical breakdowns they must receive instruction in the correct use of the equipment and the basic rules of simple maintenance. Short seminars and the supervisory visits can be used to this end. In the medium term, however, maintenance must be given a larger place in basic training programmes.

Administrative personnel responsible for funding and procurement should also receive in-depth training in order to be able to react appropriately and without delay to technical breakdowns.

9.4 Supervision

From the very onset, the supervision system developed for the district health system must stress the importance of technical aspects. Even when maintenance personnel is not yet available, the supervisory health personnel can be trained to incorporate maintenance in its backstopping to the health services using check-lists etc.

Available specialist personnel must be involved in the existing supervision system, to avoid duplication of structures and waste of funds.

Ideally, the technical service in the district would be supervised by the next higher instance, i.e. technical personnel from the regional or central level.

9.5 Costs and Financing

Experiences to date in Africa show that maintenance for a hospital makes up approximately 5 % of the annual investment costs (new value of buildings, plants and equipment), 3 % per year in smaller health services. The share of maintenance costs in the overall annual operating costs also amounts to approximately 5 % (Halbwachs, personal communication).

Financing comes from various sources. Personnel costs, i.e. the technicians in the central workshop, and medium and long-term equipment should be financed publicly. Items falling under this category must be determined for each particular case separately. As a rule, all equipment with an operating life of over 1 year is included, whereas articles with a shorter life are considered to be consumables and are classified under the running costs.

The operating costs for maintenance should be calculated and recorded according to the new financing system. They are financed in line with the new regulations on the basis of cost recovery and cost sharing.

In addition to user charges, the communities can contribute to the maintenance of their health services, by providing labour for cleaning, repair and waste disposal.

The potential to generate additional income for the workshop through services for clients outside the health system should be examined and encouraged if appropriate. The workshop personnel should in all events also profit from such extra income ("motivation").

LITERATURE:

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Halbwachs, H. : Planned Maintenance the Key in "Round Table". World Health Forum 10 (1989).

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Paine, L.H.W., F. Siem Tjam: Hospitals and the health care revolution. WHO, Geneva (1988).

Temple-Bird, C., H. Halbwachs: Spare parts and materials for the maintenance and repair of health care equipment. Report on a GTZ Workshop. Lübeck (1991).

WHO (ed.): District hospitals: guidelines for development. Western Pacific Series No.4. WHO, Manila (1992).

Diagram of the health system from: Kielmann A.A.
Can be used as basis for planning and evaluation

Health System Analysis



Grafische Darstellung des Gesundheitssystems aus A.Kielmann: Health System's Analysis (in Vorbereitung). Diese Darstellung eignet sich sehr gut als Planungs- und Evaluierungs-Grundlagenschema.

Example of a reporting system in the Loubomo Health District/Congo
These forms are compiled and sent quarterly to the District Management

RAPPORT D'ACTIVITE DES CENTRES DE SANTE

CSI: (1)

trimestre 19

Population inscrite totale: (20) (1)

urbaine: (3)

rurale: (4)

I. VISITES DU MEDECIN SUPERVISEUR

Mois	Date prévue	Date d'arrivée	Date de départ	Superviseur	Activités supervisées
(5)	(6)	(7)	(8)	(9)	(10)
Total	(10a)				
Tot. cum.	(10b)				

II. CONSULTATION CURATIVE

Mois	Nouveaux cas inscrits	couverture (2) x 100 (3) =	Total ACI vus par l'infirmier	Total N.C. étrangers	Total A.C. étrangers	% d'étrangers: (5) x 100 (7) =	Total cas référés
(11)	(12) (2)	(13) (1) (3)	(14) (4)	(15) (5)	(16) (6)	(17) (2) (7)	(18) (8)
Total	(19)						
Tot. cum.	(20)						

Example of a reporting system in the Loubomo Health District/Congo (2)

3. Fonctionnement

Mois	Enf. surv. au déb. du mois	Entrées		Sorties					Enfants surv. à la fin du mois
		N.C.	Transf.	5 ans	DCD	Transf.	ABD	pas d'inf.	
(1)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(4)	(4)	(40)	(41)	(48)	(49)	(50)	(51)	(52)	(53)
Total	(55)								
Tot. cum.	(56)								

V. CONSULTATION PRENATALE

Nbr. de naiss. par mois (1) =

Nbr. de inscrits x 4,3

100 x 12

=

1. couverture

Mois	N.C.		A.C.		(2)x100		Femmes surv. au déb. mois		Entrées		Sorties		Femmes surv. à la fin du mois	
	N.C.	(1)	A.C.	(2)	(3)	(4)	(5)	(6)	N.C.	TRF	DCD	TRF	Acc.	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(4)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)
Total	(55)													
Tot. cum.	(56)													

(1) est le nombre de naissances estimées par mois

Example of a reporting system in the Loubomo Health District/Congo (3)

III. SITUATION FINANCIERE

Mois	R e c e t t e s								D e p e n s e s				S o l d e
	NCI	NCE	ACE	CPN	CPS	CND	autres	Total	Méd.	Primes	consommabl.	Total	
(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)
Total	(35)												
Tot. cum.	(36)												

IV. CONSULTATION PRESCOLAIRE

Population couverte x 4,3
Nombre de naiss. par mois (1) = ----- = ----- (1)
100 x 12

1. Couverture

Mois	N. C. inscrits		couverture		A. C. vus par l'infirm.	Charge de travail pour l'infirmier	
	Total	< 1 an	(3) x 100	(4) =		(6) = (2) + (5)	(6)
(37)	(38)	(39)	(40)	(41)	(5) (42)	(43)	(44)
Total	(47)						
Total cum.	(48)						

Example of a reporting system in the Loubomo Health District/Congo (4)

VI. Vaccinations.

1. Couverture.

Mois	Polio					BCG		Rougeole		
	Nbr	Nbr	Nbr	Nbr	Couverture (5)x100 (6)=----- (1)	Nbr rapp.	Nbr	couverture (8)x100 (9)=----- (1)	Nbr	couverture (10)x100 (11)=----- (1)
77	0	1	(3)	(4)	(6)	(7)	(8)	(9)	(10)	(11)
	(2)	(73)	(12)	(12)	(79)	(77)	(78)	(77)	(69)	(87)
Total	(82)									
Tot. cum.	(82)									

Ditecocq						V. A. T		
Mois	Nbr I	Nbr II	Nbr III	Couverture (14)x100 (15)=	Nbr Rapp.	Nbr I	Nbr II	RAPP VAT
81	(12)	(13)	(87)	(15) = (1)	(89)	(17)	(91)	(97)
	(82)	(73)	(12)	(79)	(77)	(78)	(77)	(87)
Total	(97)							
Tot. Cum	(17)							

Example of a reporting system in the Loubomo Health District/Congo (6)

IX. CONSULTATION NAISSANCES DESIRABLES

Mois	Depot-Provera			Pilule			Stérilet.	
	N.C.	Total	Aband.	N.C.	Total	Aband.	N.C.	Total.
137	137	137	137	137	137	137	137	137
Total								
Tot. cum.								

X. AUTRES ACTIVITES DU CENTRE

Mois	Nbr. des séances nutr. ou educ. san.	Invit. écrit.	Visites à domicile	Réunions com.de santé	Réunions d'uni. fonct.	Nbr. des nouv. recensés	Activités mobiles
147	147	147	147	147	147	147	147
Total							
Tot.cum.							

Example of a monitoring form for district management to record the functioning of all health centres in the Loubomo Health District/Congo

14.2.4 SYNOPSIS D'ACTIVITES DES CENTRES DE SANTE

____ Semestre 19____

	CS ₁	CS ₂	CS ₃	CS ₄
1. Population cible				
2. Population inscrite				
3. Population < 5 km				
4. Taux d'utilisation CSI				
5. Taux de couverture CPM				
6. % grossesses à haut risque				
7. Accouchements réalisés				
8. Femmes inscrites à la CHD				
9. Taux de couverture CPS				
10. Total d'enfants inscrits à la CPS				
11. % d'enfants malnutris				
12. Couverture vaccinale				
13. Nombre total des tuberculeux				
14. Nombre des tuberculeux réguliers				
15. Nombre total des lépreux				
16. Nombre des lépreux réguliers				
17. Nombre des cas MST				
18. % des malades mis sous antibiotique				
19. % des malades mis sous chloroquine				
20. % des cas de Chloroquine - résistance				
21. Nombre de malades référés				
22. Coûts de l'épisode - maladie				
23. % des réunions de comité de santé				
24. % des supervisions effectuées				

Annex 4

North West Province/Cameroon

Comprehensive HMIS project. Overview of the reporting system and excerpts (2 pages) from reporting forms for health centre level

PERIOD	REPORTS	SEND OUT TO
MONTHLY	1. Public Health Activity Summary 2. Checklist of forms received 3. The Ten Most Common Diseases	Ministry of Health The Delegate Chief of Statistics Chief of Statistics Chief of Coordinators Chief of Statistics The Delegate Preventive Medicine
QUARTERLY	1. Summary Report on Community Health Posts 2. Vaccination Coverage of Health Posts 3. Health Facility Utiliz.	Chief of Coordinators 24 reg. Coordinators Chief of Coordinators Preventive Medicine The Delegate et.all
HALF YEARLY	1. Summary Statistics, all facilities 2. Vital Statistics, 3. Utilization of Health Centres, Hospital and Health Post	The Delegate Chief of Statistics Preventive Medicine
YEARLY	1. Public Health Activity Form Summary 2. Community Health Post Yearly Summary 3. Summary of Laboratory Reports 4. Equipment Lists -Health Posts -Health Centres 5. List of Staff -Health Posts -Health Centres 6. List of All Health Facilities	The Delegate Chief of Statistics Preventive Medicine Chief of Coordinators Preventive Medicine Chief of Laboratories Chief of Phropharmacy Preventive Medicine The Delegate Chief of Coordinators Preventive Medicine The Delegate Chief of Personnel Chief of Coordinators Preventive Medicine (to all of the above)

MINISTERE DE LA SANTE PUBLIQUE
DEPS/SSSD

REPUBLIQUE DU CAMEROUN
REPUBLIC OF CAMEROON

FICHE D'ACTIVITES DE SANTE PUBLIQUE
ET TABLEAU DE MORBIDITE-MORTALITE
PUBLIC HEALTH ACTIVITIES FORM
AND TABLE OF MORBIDITY-MORTALITY

Rapport mensuel/annuel : mois
(Monthly/annual report)

année
(year)

Cachet - Stamp

Date

Province

Département
(Division)

Arrondissement
(Sub-Division)

Formation
(Health center)

Catégorie

Nombre de lits
(number of beds)

Secteur : Public - Privé
(Public - Private)

Medecine

Chirurgie
(Surgery)

Pediatrie
(Pediatry)

Maternité
(Maternity)

Autre

I - ACTIVITES DE SOINS / NURSING ACTIVITIES

Activités en Activites in	Dispensaire Dispensary	Medecine Medicine	Chirurgie Surgery	Pediatrie/Pediatry		Autres/Other		
				0-1 an year	1-4 ans years			
Consultants nouveaux New consultants								
Consultations (anciennes + nouvelles) Consultation (old + new)								
Malades hospitalisés Hospitalized patients								
Journées d'hospitalisation Hospitalization days								
Nombre de décès Number of deaths								

II - ACTIVITES DES MATERNITES / MATERNITY ACTIVITIES

	Nombre Number	Naissances vivantes Live births		Prématurés Prematures		Mort-nés Still births	Accouchements dystociques Difficult deliveries	Décès mères en couche Maternal deaths	Avortements Abortions
		M	F	M	F				
Nombre d'entrées Admissions	1 enfant 1 child								
Journées d'hospitalisation Hospitalization days	2 enfants 2 children								
	3 enfants + 3 children +								

III - ACTIVITES DES PMI / PMI ACTIVITIES

	Pré-natal Antenatal	Post-natal Postnatal	Nourissances New babies		Détachés Discharge
			0-1 an	1-4 ans	
Consultants nouveaux New consultants					
Consultations (nouvelles + anciennes) Consultations (new + old)					

IV - ACTIVITES DE LA MEDECINE PREVENTIVE / PREVENTIVE MEDICINE ACTIVITIES

Vaccinations	BCG	DTCOG	Anapedia	Varicelle Small Pox	Rougeole Measles	Antimarielle Yellow fever	Méningite Meningitis	Antitétanique Antitetanic	Anturabique	Autres Others	
Nombre Number											

Vaccination complètement effectuée

MALADIES DISEASES	C.I.M. O.M.S. Révision 1985		AGE ET SEXE										TOTAL/SEX	
			- 1 an		1 - 4 ans		5 - 14 ans		15 - 44 ans		45 ans et +			
			M	F	M	F	M	F	M	F	M	F	M	F
Report		C O	277	347	367	350	383	360	270	223	371	319	1688	1649
Bilharziose intestinale Intestinal bilharziasis	120-1	C O											3	2
Bilharziose vésicale Vesical bilharziasis	120-0	C O												
Infections gonococciques (goné +) Gonococcal infections (goné +)	098-0	C O						6	32	26	19	26	51	58
Infections gonococciques (cas non confirmés) Gonococcal infections (unconfirmed case)	098-1	C O												
Léishmaniose Leishmaniasis	085	C O												
Rhumatisme Rheumatism	718	C O						2	9	25	46	27	55	54
Troubles mentaux Mental disorders	298	C O												
Epilepsie Epilepsy	346	C O					2		17	12	22	19	41	31
Conjonctivites Conjunctivitis	378	C O	24	37	22	27	28	18	16	20	18	22	128	124
Otitis Otitis and diseases of ears	300	C O	11	2	6	13	14	26	19	15	24	14	74	70
Ophthalmies du nouveau-né Ophthalmia neonatorum	300	C O	2		3	7		8					5	15
Occlusion intestinale et hernie Intestinal occlusion and hernia	558	C O	2			3			4	11	17	13	23	27
Appendicite Appendicitis	548	C O				2			11	9	14	22	25	33
Fractures entorses/luxations Fractures sprains/dislocations	N829	C O	44	49	39	28	21	26	22	31	23	34	152	160
Morsures venimeuses Bites of venomous animals	E908	C O	25	12	15	19	26	20	23	15	20	30	149	96
Diabète Diabetes	258	C O			1		4		22	15	33	21	60	36
Maladies hypertensives Hypertensive diseases	408	C O					2	4	43	31	46	33	91	68
Goitre Goitre	248	C O	2		3	4		3	27	8	8	3	40	18
Malnutrition Kwashiorkor	287	C O	31	11	24	12	14						69	28
Anémie Anemia	285	C O	27	12	34	26	29	26	14	14	19	15	123	93
Brûlures Burns	N940	C O	13	9	8	29	27	21	20	36	26	11	94	106
Empoisonnements Poisonings	E900	C O	4		1	9		4	6	12	14	4	25	29
Intoxication Intoxication	N983	C O	3	1	9	8	4	6	12	14	4	18	32	42
Avortement Abortion	845	C O						3		94		87		44
Autres complications de la grossesse et suite de couches Others complications of pregnancy and puerperium	834	C O						13		51		13		32
Maladies de la peau Diseases of skin	848	C O	41	13	28	15	18	21	11	9	12	8	100	66
Orégonocytose Sickle cell diseases	282-5	C O	20	32	18	19	28	20					66	71
Onchocercose Onchocerciasis	125-3	C O				4		3	1	8	11		12	15
Autres maladies non spécifiées Other not specified diseases	796	C O	137	203	193	171	196	148	231	387	229	288	982	1297
			2		1	1			2	2			2	6
TOTAL		C O	699	728	781	738	799	838	810	1056	996	967	1085	1507
			6		1	2			2	5	3	1	13	9

Loubomo/Congo: Simple monitoring instruments (3)

PSSP/GTZ
NIARI

Pièce N° _____

Reçu N° _____

Reçu du CS N° _____, versé par M. _____

La somme de _____

Le _____ 19 _____

Partie versante

Le Responsable du Fonds
de roulement

Tabl. 20: *Modèle du Reçu de versement*

FOND DE ROULEMENT PSSP/GTZ - NIARI/CONGO

JOURNAL DE LA CAISSE FEUILLE N° _____

N.B.: Les sorties sont approuvées par le Chef Comptable après vérification des pièces.

DATE	OPERATION	Reçu N°	CAISSE			Signature
			Entrée	Sortie	Solde	

Tabl. 21: *Modèle du Journal de la Caisse*

Suggestions for the design of supervision forms
from: D. Flahault, M. Piot, A. Franklin: The supervision of health personnel at district level, WHO, Geneva (1988)

EXAMPLES OF SUPERVISION INSTRUMENTS

Supervision instrument 11

Supervision report

Programme
Region
Institution/unit.....
Staff member

Purpose of visit

Working hypotheses and priority activities to be supervised:
-
-
-
-

Observations made, persons contacted, discussions and meetings held

Place	Date	Person contacted	Content

Needs identified:

	Measures taken
1 Objectives to be clarified	-
2 Working instruments to be developed	-
3 Skills to be acquired	-
4 Working methods to be introduced	-
5 Information to be conveyed	-
6 Resources to be obtained	-
7 Others	-

Supervision forms (2)

THE SUPERVISION OF HEALTH PERSONNEL AT DISTRICT LEVEL

Programme for putting the measures decided on into effect (see Instrument 12)

<i>Support needed</i> (type)	(from whom)	(when)
---------------------------------	-------------	--------

Scheduled date of next supervision visit:

<i>Date:</i>	<i>Signature:</i>
--------------	-------------------

Supervisor's name:

Supervision forms (3)

Supervision instrument 8

*Checklists for
the supervision of
managerial activities*

Programme PHC
 Region —
 Institution/unit Health centre No. 18
 Staff member Head/leader of health
 centre

1 — Management audit

Method of supervision: checklist.¹ This method can be used to review managerial activities and examine successes and failures.

Under the date of the audit, write Y(yes) or N(no) opposite each statement.

	Date	Action	Date	Action
1 — Planning and organization				
The health centre has one or more identified objectives	2.1.81 Y	Immunize 400 children	3.1.82 Y	Completed
These objectives are known to the health team				
Regular staff meetings are held				
A year-plan has been written and displayed				
There is a weekly timetable				
Staff duties are listed on a roster				
District activities are scheduled in advance				
Changes in rosters, schedules or other events are clearly communicated to the health team				
2 — Personnel				
Each member of the team has a written job description				
Each staff member knows to whom to report and from whom to receive instructions				
The team leader delegates work wherever possible				
On-the-job training is aided in different ways—by discussion, books or demonstration				
Good work is acknowledged by the team leader				
Opportunity exists for initiative and responsibility in the work				
Supervision takes the form of educating and helping and not criticizing				

¹ See: *On being in charge*, World Health Organization, Geneva, 1980, pp. 343–344.

Supervision forms (4)

EXAMPLES OF SUPERVISION INSTRUMENTS

	Date	Action	Date	Action
<p>Workers are using the skills for which they were trained</p> <p>Team members show concern for the welfare of patients</p> <p>3 — Resources</p> <p>The account ledgers are in order and up to date</p> <p>The petty cash balance sheet is correct</p> <p>There is sufficient equipment</p> <p>The stock ledger is balanced and corresponds to the store shelves and inventories</p> <p>Drug issues are recorded and reviewed</p> <p>The A/B shelf system is used for vital drugs</p> <p>There are minimum queues and "bottle-necks" in the outpatient clinic</p> <p>There are adequate and clearly marked maps of the district</p> <p>The transport system is well maintained</p> <p>4 — District and public</p> <p>There is a health centre committee made up of people living in the area</p> <p>Efforts are made to educate the public in health</p> <p>The health needs of the public are identified and discussed</p> <p>The health goals and activities relate to public health needs</p> <p>The following health activities are expanding:</p> <ul style="list-style-type: none">- maternal and child clinics- immunization- nutrition programme- sanitation programme <p>5 — Control system</p> <p>There are monthly statistical reports</p> <p>There is an annual report</p> <p>The patient registers are clear and up to date</p> <p>Patient records can be found when necessary</p> <p>Carbon copies of letters are made and filed</p> <p>There is an index of files and registers</p> <p>There is a well-kept log in the transport vehicle</p> <p>There is a method to identify discrepancies in drug usage</p>				

Supervision forms (5)

THE SUPERVISION OF HEALTH PERSONNEL AT DISTRICT LEVEL

2—Annual performance assessment

The taking of administrative decisions — ranging from increments and promotions to sanctions and dismissal — should be based on continuous records of the performance of those concerned. Moreover, the development of the personnel's skills needs to be carefully planned. The supervisor is therefore expected to make an annual assessment of the performance of each worker for whom he is responsible so as to facilitate administrative and staff development decisions.

Various assessment instruments can be prepared, and in many cases one model has been adopted for use nationwide.

1 The first example contains 14 "performance indicators" suggested by Katz & Snow (see footnote 1, page 38) pp. 55–56.¹

Assessment of professional competence

Staff member's name: _____
Unit: _____
Town or village: _____
Title or post: _____

Date: _____
Supervisor's name: _____
Place of work: _____

Performance indicators

Score (out of 10)

Accuracy	_____	_____
Efficiency	_____	_____
Initiative	_____	_____
Integrity	_____	_____
Organization	_____	_____
Problem-solving	_____	_____
Ability to work with others	_____	_____
Attention to safety regulations	_____	_____
Care and use of equipment, materials, work area	_____	_____
Communication (oral)	_____	_____
Communication (written)	_____	_____
Knowledge retention	_____	_____
Knowledge application	_____	_____
Promptness	_____	_____

Comments: _____

Supervisor's signature

¹ This assessment instrument is based on a thorough knowledge and continuous observation of the staff member by the supervisor. Each assessment item can be refined by assigning criteria to it.

Supervision forms (6)

EXAMPLES OF SUPERVISION INSTRUMENTS

2 The *second example*¹ is applicable to all full-time employees and consists of two parts:

Part 1
(to be completed by supervisor before meeting with employee)

Name _____	Employee no. _____
Job title _____	Date of employment _____
Location _____	Date of this evaluation _____

EMPLOYEE'S STRONG POINTS

These strong points can be used more effectively by doing the following:

AREAS THAT NEED IMPROVEMENT

These areas can be strengthened by doing the following:

Part 2
(to be completed by supervisor and employee together)

PLAN FOR IMPROVING PERFORMANCE FOR THE COMING YEAR

See: MEDEX Primary Health Care Series No. 27, University of Hawaii, Honolulu, Hawaii, 1983.

Supervision forms (7)

COMMENTS

PERFORMANCE REVIEW DATES FOR THE COMING YEAR

Signature of employee _____ Date _____
Signature of supervisor _____ Job title _____ Date _____
Signature of personnel officer _____ Date _____

3—Management of supplies and equipment¹

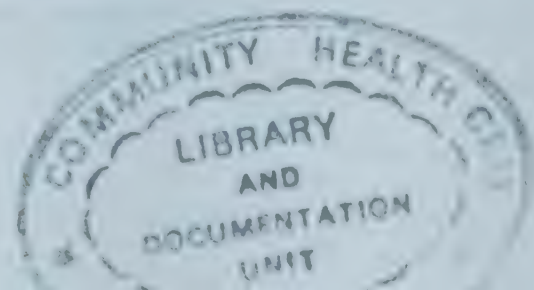
Methods of supervision: review, together with the staff, of post descriptions, written procedures and available documentation.

Supervision of this activity is based on the existence:

- a. of post descriptions specifying the responsibilities for ordering, storing, maintaining and controlling supplies.
- b. of written procedures for:
 - ordering
 - storage
 - maintenance, and
 - control of supplies received and issued
- c. of appropriate documentation on:
 - stock levels
 - order forms and delivery notes
 - issue vouchers
 - inventories and inspection checklists.

Supervision of this aspect of management consists in listing the difficulties experienced by staff and managers with regard to supplies, encouraging them to suggest possible corrective measures, and helping to see that such measures are put into effect.

¹ It would be a good idea—before starting to supervise the management of supplies and equipment—to read or revise Part III, Chapter I, of *On being in charge*, Geneva, World Health Organization, 1980, pp. 145–156.



Supervision forms (8)

EXAMPLES OF SUPERVISION INSTRUMENTS

4—*Financial management*¹

Method of supervision: problem-solving.

The aim here is not financial control but the supervision of financial management, i.e. ways of identifying the difficulties encountered by staff and managers with regard to financial resources, getting them to suggest appropriate corrective measures, and helping to see that such measures are put into effect.

Delays in the transfer of funds allocated, insufficient petty cash for meeting minor items of expenditure, cumbersome procedures for obtaining very small items, etc. are problems that can seriously handicap health personnel and will need to be closely studied, as will the level of resources, the competence of the people involved and the measures proposed in the past to remedy such difficulties.

Problems diagnosed in this way will be discussed with the entire staff so as to decide what corrective measures to recommend.

¹ It would be a good idea—before starting to supervise financial management—to read or revise Part III, Chapter 3, of *On being in charge*, Geneva, World Health Organization, 1980, pp. 177–183.

Annex 7

Burkina Faso. revised staffing requirements for health services as negotiated with the World Bank (July 1993)

Normes minimales en vue du redéploiement du personnel

Le Gouvernement considère les normes suivantes comme un minimum absolu sous lequel les facilités sanitaires ne peuvent opérer.

CSPS

1 IDE ou IB, 1 AIS, 1 acc aux (soit 3 personnes)

CM

Médecin, 1 SFE, 3 IBE ou ID, 1 acc aux, 2 manoeuvres, 1 secrétaire gestionnaire (soit 10 personnes)

CMA

2 médecins, 1 IDE, 4 IB, 1 SFE, 1 accoucheuse auxiliaire, 2 aide-opérateurs, 2 infirmiers anesthésistes, 1 infirmier de laboratoire, 1 infirmier odontologiste, 1 aide-comptable, 1 fille ou garçon de salle, 2 manoeuvres, 1 gardien, 1 cuisinier, 1 blanchisseur, et 1 chauffeur.

District

- il y a 53 équipes cadre de district, dont le nombre de membres est variable, mais qui doivent comporter au minimum deux médecins, l'administrateur de l'hôpital (s'il s'agit du CHR) et un infirmier expérimenté en santé publique;
- pharmacies: les pharmaciens provinciaux, les préparateurs en pharmacie et les infirmiers brevetés spécialistes en pharmacie sont utilisés dans les pharmacies de district. Cependant, les autres infirmiers peuvent aussi convenir pour ce travail (confer supra), moyennant une formation sur le tas appropriée ;
- l'équipe mobile de district nécessite deux mi-temps infirmiers (un des deux peut être remplacé par un mi-temps AIS).

DPS

Il se réduit au seul directeur provincial de la santé, et lui-même dirigera l'ECDD où la DPS est située; le cas échéant, il déménagera au CHR.

Personnel de santé publique attachés aux CHR

Il s'agit des 10 équipes CRESA, des 6 équipes de maintenance, et des 4 équipes d'épidémiologie.

Training manual for community representatives (Intervillage Health Committees) in the South West Province/Cameroon (1)
The first three pages (of 36)

REPUBLIC OF CAMEROON
Peace - Work - Fatherland

MINISTRY OF PUBLIC HEALTH

DELEGATION OF PUBLIC HEALTH
PROVINCIAL SERVICE OF PREVENTIVE MEDICINE
AND RURAL HEALTH SERVICES, AND PRIMARY
HEALTH CARE ESSENTIAL DRUG
PROGRAMME



A MANUAL FOR THE TRAINING OF INTERVILLAGE HEALTH COMMITTEES
WITHIN THE RE-ORIENTATION OF PRIMARY HEALTH CARE
IN THE SOUTH WEST PROVINCE

Training manual for community representatives (Intervillage Health Committees) in the South West Province/Cameroon (2)

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Training manual for community representatives (Intervillage Health Committees) in the South West Province/Cameroon (3)

INTERVILLAGE HEALTH COMMITTEE TRAINING

Duration of training : 3 days

Participants :

- . All executive members of the intervillage health committee (IVHC)
- . The management subcommittee of the IVHC (if existing)
- . The chief of post of the H/C concerned
- . The pharmacy attendant of the H/C concerned

Trainers :

- .. Subdivisional and divisional supervisory teams
- .. Central pharmacy staff
- .. Provincial staff preventive medicine

Location : Divisional or subdivisional headquarters

General objective of the training:

To inform health committee members, pharmacy attendants and chiefs of posts of H/Cs on the different roles they play in their reorientated health area and to train them in their tasks.

Specific objectives

At the end of the training participants should be able to:

- Know the principles of the Reorientation of PHC in Cameroon
- Define the concepts of health district, health area, co-financing and self management
- Understand the cost-recovery system at H/C level
- Understand the status and set up of the PHC drug programme
- Know the basic elements of the management of a pharmacy
- Control a pharmacy
- Manage pharmacy staff
- Manage and control resources generated at H/C level
- Communicate effectively with H/C staff, community members, administrative authorities and the subdivisional medical officer.
- Know some common pitfalls of H/C fund management.

Essential drugs list for a health centre in the South West Province/Cameroon

(1)

ANNUAL PROPHARMACY INVENTORY 19

PLACE: Health CenterDATE: 1 / 19

ITEM NAME	QTY X	PRICE	= TOTAL CFA
Adhesive Tape		400	
Antacide tabs		15	
Ampicillin caps		30	
Ampicillin Syrup		800	
Aspirin tab		10	
Benzyl Benzoate 100 ml		300	
Bipenicillin 1M 1U vial		180	
Celestamine tabs		30	
Chloramphenicol Ear drop		300	
Chloramphenicol Eye drop		300	
Chloroquine tabs		10	
Compress Sterile		100	
Condoms (4)		50	
Cotrimoxazole tabs		30	
Cotrimoxazole Syrup		800	
Cotton 0.5 kg roll		1.200	
Cough Syrup		1.000	
Dextrose 5% 250 ml		450	
Detrose 5% 500 ml		500	
Diazepam tab		10	
Diethyl Carbamazine tabs		20	
Disposable Syringe 5 ml		30	
Disposable Syringe 10 ml		30	
Ergometrine 1 ml amps		100	
Ferrous Gluconate tabs		5	
Ferrous Gluconate syrup		900	
Folic Acid tabs		5	
Fungus ointment tubes		800	
Gauze Bandage		80	
G. V. Paint 100 ml		100	
Infusion set		200	
Linalment 100 ml		400	
Mebendazole tabs		30	
Mebendazole syrup		500	
Mebendazole tabs		40	
Metronidazole		10	
Needle No 2, 21 G		10	
Needle No 12, 22 G			

SUB - TOTAL CARRIED FORWARD

SUB - TOTAL BROUGHT FORWARD

	QYT X	PRICE	= TOTAL CFA
Needle Butterfly No. 23		50	
Needle Butterfly No. 25		50	
Normal Saline 500 ml		500	
Oral Rehydration salt		50	
Paracetamol tabs		10	
Penicillin G. IM IU vial		120	
Penicillin V tabs		30	
Phenobarbiton tabs		5	
Polygynax ovules		2.000	
Prenoxan supp. 1 cg (10)		350	
Prenoxan supp. 2 cg (10)		400	
Promethazine tabs		5	
Quinimax tabs		30	
Quinimax amp 2 ml		100	
Quinimax amp 4 ml		120	
Tertracycline caps		30	
Tertracycline eye ointment		200	
Thermometer		500	
Visceralgine tabs		35	
Visceralgine amp		80	
Vogalene supp. (10).		500	
Vogalene amp		130	
Water for inj. 5 ml		30	
Wound Plaster 10 cm		20	
PRINTINGS:			
ANC-CARD		100	
Birth Certificate		50	
Consultation Book		50	
Envelopes for Drugs		-	
Road to Health Card		100	

TOTAL

11. Money not accounted for

TOTAL CAPITAL

Name and Signature Attendant

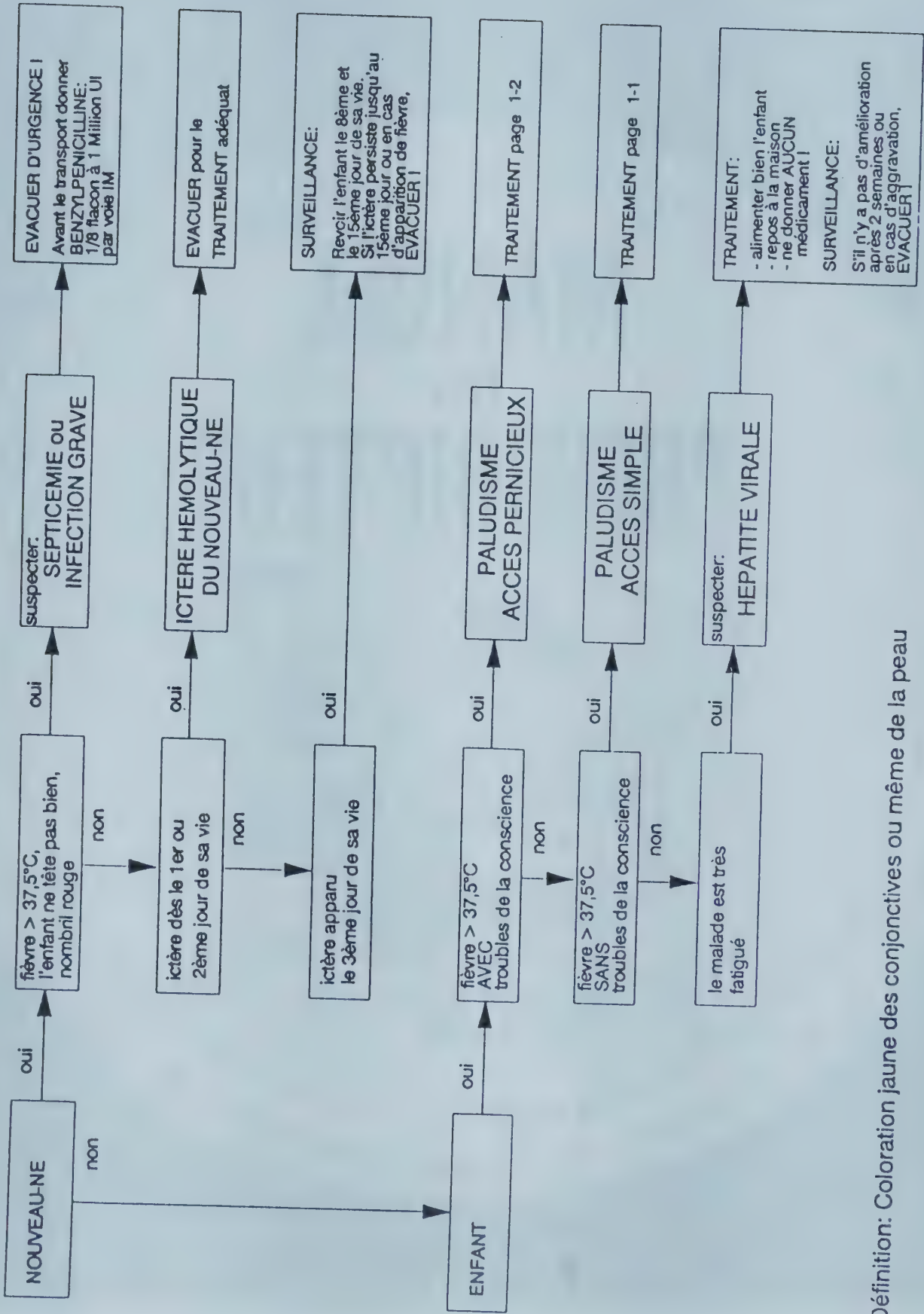
Name and Signature Supervisor

Example from the standardized diagnosis and treatment guidelines used in Mahajanga/Madagaskar (1)



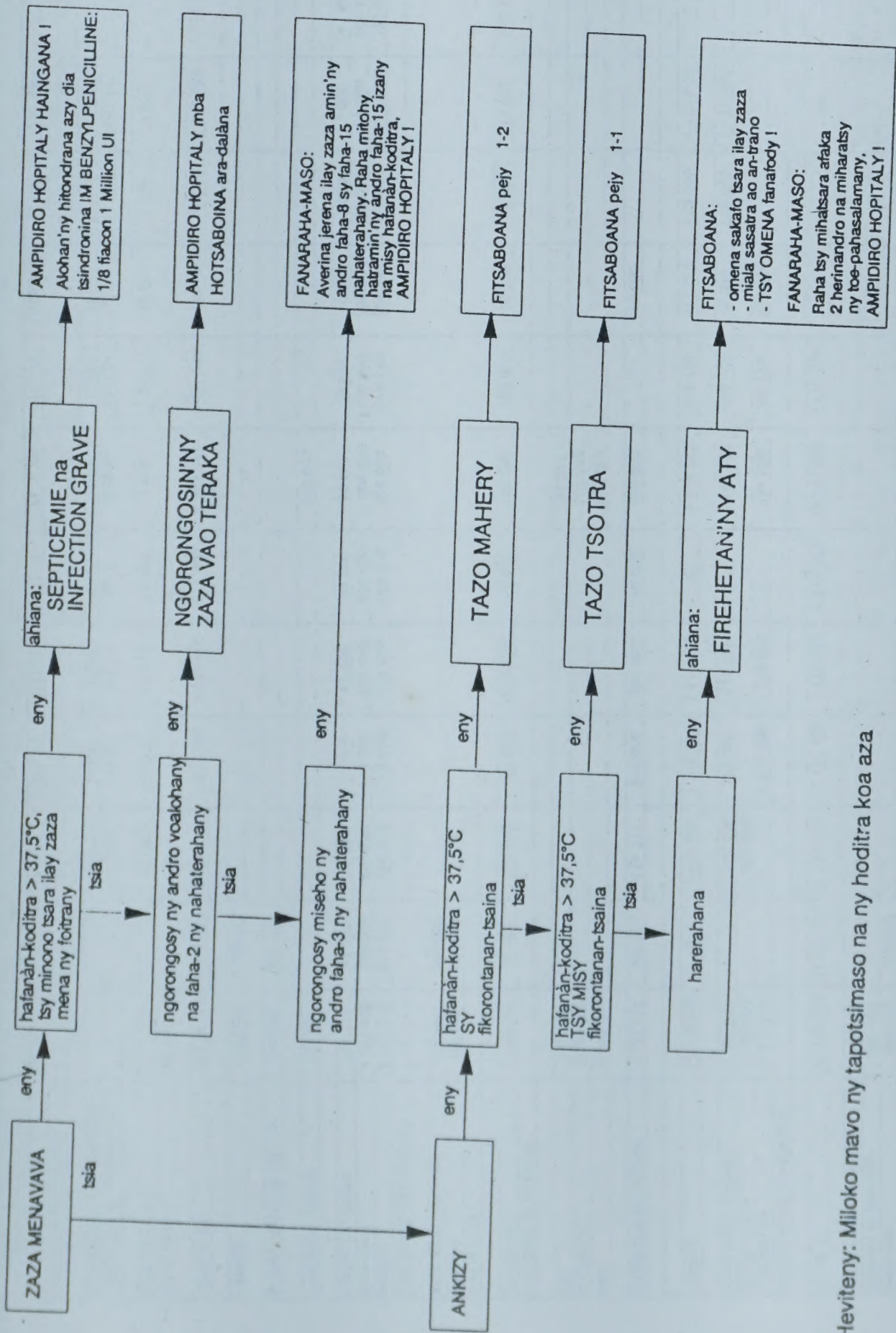
Example from the standardized diagnosis and treatment guidelines used in Mahajanga/Madagascar (2)

Examiner toujours en bonne lumière, préférablement au dehors !



Définition: Coloration jaune des conjonctives ou même de la peau

Example from the standardized diagnosis and treatment guidelines used in Mahajanga/Madagascar (3)



Heviteny: Miloko mavo ny tapotsimaso na ny hoditra koa aza

Example of an analytical book-keeping form used in Hospital Bé, Lomé/Togo
It shows relatively high administration costs; they could be followed up by selective analysis.

CATEGORIE DE COUTS	TOTAL	Adminis- tration	laboratoire	CIME	CPN	PF + CPN	MATERNITE accouchement normal	MEDECINE GENERALE			injection	SERVICE TECHNIQUE	
								compliqué	consultation	puiseiment		Hygiène	maintenance
1-PERSONNEL	102	16	6	16	7	8	16	5	7	4	3	11	2
salaires	81 744 000	12 072 000	1 780 000	20 340 000	4 920 000	5 400 000	12 060 000	4 200 000	5 808 000	2 400 000	2 160 000	4 272 000	960 000
primes de garde	2 856 000												
primes de sécurité	4 212 000	504 000	216 000	612 000	252 000	252 000	684 000	216 000	252 000	144 000	108 000	360 000	72 000
honoraires	500 000	500 000											
transport du personnel	200 000												
médicaments gratuits	1 700 000												
TOTAL 1	91 212 000	13 076 000	1 996 000	20 952 000	5 172 000	5 652 000	12 744 000	4 416 000					
2-CONSOMMABLES MEDICAUX													
médicaments	3 511 850												
réactifs de labo	1 400 000		1 400 000	1 000 000	1 300 000		794 500	97 350	320 000				
autres consommables	7 200 250		1 000 000	310 000	315 000		3 104 250	608 400	5 000	720 000	1 137 600		
TOTAL 2	12 112 100	0	2 400 000	1 310 000	1 615 000	0	3 898 750	705 750	325 000	720 000	1 137 600	0	0
3-SUPPORTS DE GESTION	3 225 827	966 616	184 211	390 000	990 000	10 000	595 000		90 000				
EAU	1 200 000												
ELECTRICITE	2 900 000						228 947						
PTT	500 000						553 289						
4-BLOUSES ET PRODUITS													
D'HYGIENE	1 050 000	50 000	100 000	200 000	100 000 00	50 000	300 000	100 000	50 000	10 000	10 000	100 000	
5-VEHICULES													
carburant	500 000	500 000											
entretien et réparation	500 000	500 000											
6-ENTRETIEN/MAINTENANCE													
batiment	4 565 520	876 800	328 800	548 000	109 600	164 400	548 000	405 520	328 800	328 800	324 000	383 600	219 200
équipement	4 250 000	250 000	800 000	400 000	200 000	400 000	1 000 000	400 000	200 000	25 000	25 000	500 000	50 000
meublier non médical	363 333	40 000	10 000	50 000	40 000	50 000	50 000	20 000	10 000	5 000	5 000	41 667	41 667
7-VIREMENT COSABE	268 000						700 000						
8-FRAIS COMITE DE GESTION	300 000	300 000											
9-DIVERS	1 000 000	1 000 000											
TOTAL 2-10	32 734 780	4 483 416	3 823 011	2 898 000	3 054 600	674 400	7 969 382	1 631 270	1 003 800	1 088 800	1 501 600	1 025 267	310 867
TOTAL GENERAL	123 946 780												
nb de prestations			10 000	25 000	12 000	10 000	3 000	500	15 000	3 200	7 200		
couts directs par prestation			382,30	115,92	254,55	67,44	2656,46	3262,54	66,92	340,25	208,56		
couts administratifs / prestation			67,75	169,37	81,30	67,75	20,32	3,39	101,62	21,68	48,78		
couts totaux par prestation													
hors salaires			450,05	285,29	335,85	135,19	2676,78	3265,93	168,54	361,93	257,33		

